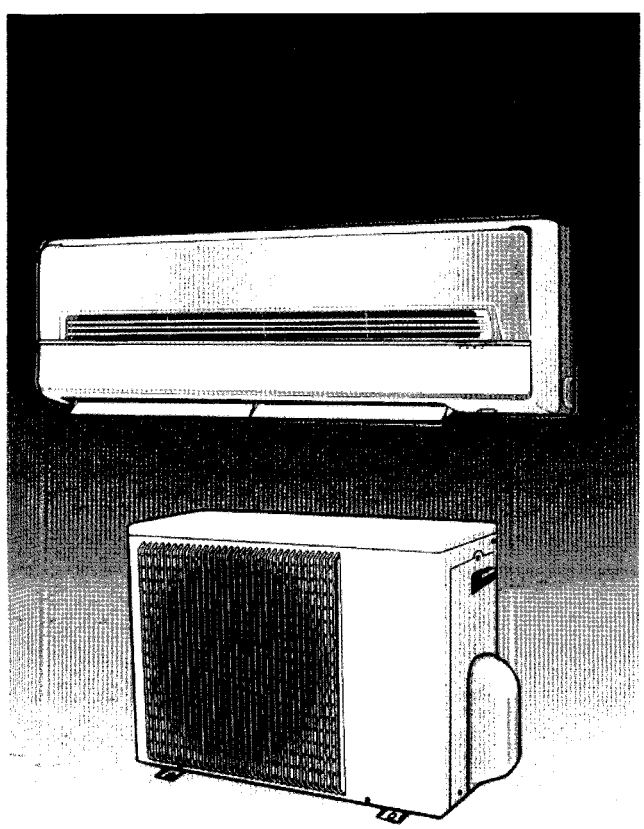
SAMSUNG

ROOM AIR CONDITIONER

INDOOR UNIT	OUTDOOR UNIT
AQ12SGGE	UQ12SGGE
AQ12SBGE	UQ12SBGE
SH12ZSG	SH12ZSGX
AQ09S8GE	UQ09S8GE
AQ09SBGE	UQ09SBGE
SH09ZS8	SH09ZS8X
AQ07S8GE	UQ07S8GE
AQ07SBGE	UQ07SBGE
SH07ZS8	SH07ZS8X

SERVICE Manual

AIR CONDITIONER



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1. Product Specifications

1-1 Table

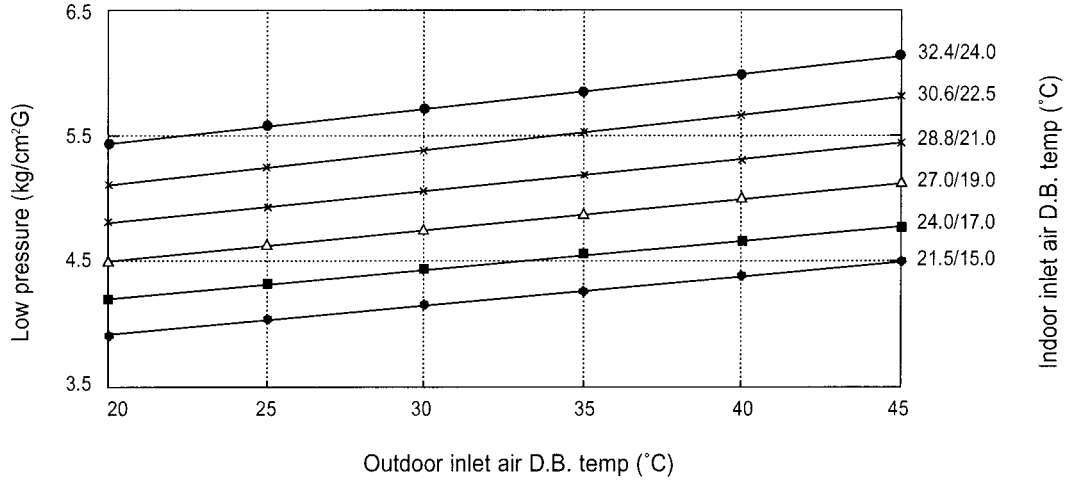
Item				Model	SH12ZSG AQ12SGGE		AQ12SBGE		SH09ZS8 AQ09S8GE	
					Indoor unit	Outdoor unit	Indoor unit	Outdoor unit	Indoor unit	Outdoor unit
Type					Wall-mounted		Wall-mounted		Wall-mounted	
Performance	Cooling			-	3.5kW		12,000BTU/h		2.7kW	
	( ) : RUSSIA, CIS				12,000(11,990)BTU/h				9,200(8,990)BTU/h	
	Heating			-	3.8kW		13,000BTU/h		2.9kW	
	( ) : RUSSIA, CIS				13,000(11,990)BTU/h				10,000(8,990)BTU/h	
	Dehumidifying			ℓ/h	1.9		1.9		1.4	
	Air volume	Cooling		m^3/min	8.0	24	8.0	24	6.4	19
		Heating			8.6	24	8.6	24	7.0	19
	Noise	Cooling		dB	40(51)	50(62)	40	50	38(48)	48(58)
	( ) : EUROVENT	Heating			40(51)	50(62)	40	50	38(48)	48(58)
	Energy efficiency ratio	Cooling		W/W	2.97		2.97		2.81	
		Heating			3.25		3.30		3.22	
	Power			V-Hz	1-220 / 240-50		1-220 / 240-50		1-220 / 240-50	
Power	Power Consumption	Cooling		W	1180		1180		960	
		Heating			1170		1150		900	
	Operating Current	Cooling		A	5.3		5.2		4.4	
		Heating			5.1		6.1		4.0	
	Power factor	Cooling		%	96.8		98.7		94.9	
		Heating			99.7		98.0		97.8	
	Starting current			A	32.0		32.0		21.0	
	Power cord	Length		m	-		-		-	
		Number of core wire			-		-		-	
		Capacity		A	250V-10 / 16A		250V-10 / 16A		250V-10 / 16A	
Size	Outer Dimension	Width x Height x Depth		mm	890 x 285 x 179	695 x 530 x 280	890 x 285 x 179	740 x 530 x 230	795 x 258 x 179	660 x 475 x 242
				inch	35.0 x 11.2 x 7.0	27.4 x 20.9 x 11.0	35.0 x 11.2 x 7.0	29.1 x 20.9 x 9.1	31.3 x 10.2 x 7.0	26.0 x 18.7 x 9.5
	Weight			kg	8.5	33.0	8.5	35.0	7.5	26.3
	Refrigerant pipe	Liquid		mm x L(MT)	ø6.35 x 5		ø6.35 x 5		ø6.35 x 5	
		GAS		mm x L(MT)	ø12.7 x 5		ø12.7 x 5		ø9.52 x 5	
	Drain hose			D x L(mm)	ø18 x 2000		ø18 x 2000		ø18 x 2000	
	Compressor	Type			Rotary		Rotary		Rotary	
		Motor	Type		-	-	-	-	-	-
			Rated output		-	-	-	-	-	-
	Blower	Type			Cross-flow	Propeller	Cross-flow	Propeller	Cross-flow	Propeller
		Motor	Type		steel	steel	steel	steel	steel	steel
			Rated output	W	15	25	15	25	11	20
Heat exchanger					2ROW 12STEP	1ROW 20STEP	2ROW 12STEP	2ROW 24STEP	2ROW 10STEP	1ROW 18STEP
Refrigerant control unit					CAPILLARY TUBE		CAPILLARY TUBE		CAPILLARY TUBE	
Freezer oil capacity				cc	600		600		360	
Refrigerant to change(R-22)				g	820		910		660	
Protection device(OLP)					RAC 12074-9622		RAC 12074-9622		RAC 12110-9622	
Cooling test Condition					INDOOR UNIT : DB27°C WB19°C OUTDOOR UNIT : DB35°C WB24°C					
Maximum operation Condition					INDOOR UNIT : DB32°C WB23°C OUTDOOR UNIT : DB43°C WB26°C					

Table(cont.)

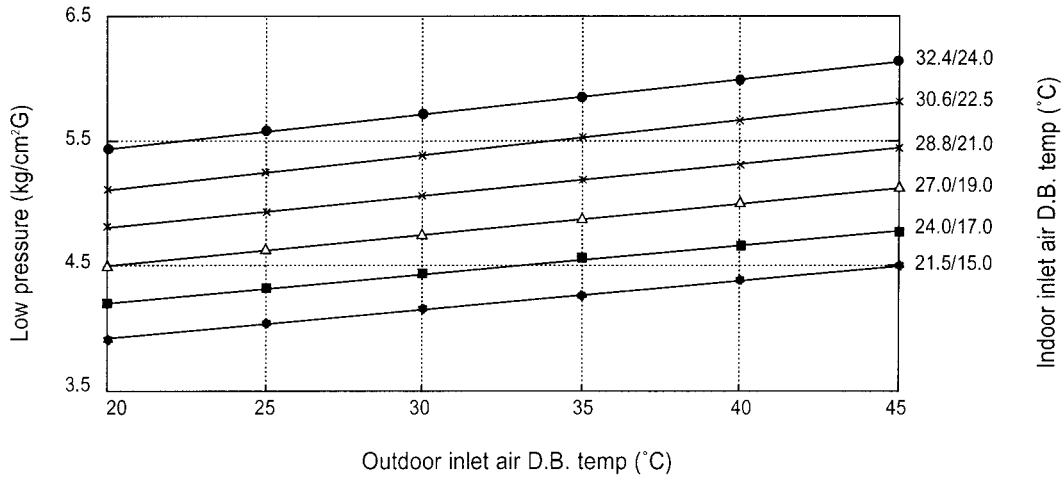
Item				Model	AQ09SBGE		SH07ZS8 AQ07S8GE		AQ07SBGE	
					Indoor unit	Outdoor unit	Indoor unit	Outdoor unit	Indoor unit	Outdoor unit
Type					Wall-mounted		Wall-mounted		Wall-mounted	
Performance	Cooling ( ) : RUSSIA, CIS			-	9,000BTU/h		2.2kW 7,500(7,500)BTU/h		7,800BTU/h	
	Heating ( ) : RUSSIA, CIS			-	10,000BTU/h		2.3kW 8,000(8,000)BTU/h		8,200BTU/h	
	Dehumidifying			ℓ/h	1.4		0.9		0.9	
	Air volume	Cooling		m^3/min	6.4	24	6.0	19	6.0	24
		Heating			7.0	24	6.2	19	6.2	24
	Noise	Cooling		dB	38	48	35(45)	47(57)	35	47
		Heating			38	48	35(45)	47(57)	35	47
	Energy efficiency ratio	Cooling		W/W	2.74		2.86		3.07	
		Heating			3.22		3.29		3.43	
	Power			V-Hz	1-220 / 240-50		1-220 / 240-50		1-220 / 240-50	
Power	Power Consumption	Cooling		W	950		770		750	
		Heating			900		700		700	
	Operating Current	Cooling		A	4.2		3.3		3.3	
		Heating			4.1		3.1		3.1	
	Power factor	Cooling		%	98.3		99.9		98.8	
		Heating			95.4		98.2		98.2	
	Starting current			A	21.0		17.0		17.0	
	Power cord	Length		m	-		-		-	
		Number of core wire			-		-		-	
		Capacity		A	250V-10 / 16A		250V-10 / 16A		250V-10 / 16A	
Size	Outer Dimension	Width x Height x Depth		mm	795 x 258 x 179	740 x 530 x 230	795 x 258 x 179	660 x 475 x 242	795 x 258 x 179	740 x 530 x 230
				inch	31.3 x 10.2 x 7.0	29.1 x 20.9 x 9.1	31.3 x 10.2 x 7.0	26.0 x 18.7 x 9.5	31.3 x 10.2 x 7.0	29.1 x 20.9 x 9.1
	Weight			kg	7.5	26.5	7.5	25.6	7.5	26.1
	Refrigerant pipe	Liquid		mm x L(MT)	ø6.35 x 5		ø6.35 x 5		ø6.35 x 5	
		GAS		mm x L(MT)	ø9.52 x 5		ø9.52 x 5		ø9.52 x 5	
	Drain hose			D x L(mm)	ø18 x 2000		ø18 x 2000		ø18 x 2000	
	Compressor	Type			Rotary		Rotary		Rotary	
		Motor	Type		-	-	-	-	-	-
			Rated output		-	-	-	-	-	-
	Blower	Type			Cross-flow	Propeller	Cross-flow	Propeller	Cross-flow	Propeller
		Motor	Type		steel	steel	steel	steel	steel	steel
			Rated output	W	11	25	11	20	11	25
Heat exchanger					2ROW 10STEP	1ROW 24STEP	2ROW 10STEP	1ROW 18STEP	2ROW 10STEP	1ROW 24STEP
Refrigerant control unit					CAPILLARY TUBE		CAPILLARY TUBE		CAPILLARY TUBE	
Freezer oil capacity				cc	360		360		360	
Refrigerant to change(R-22)				g	580		620		640	
Protection device(OLP)					RAC 12110-9622		RAC 12144-9622		RAC 12144-9622	
Cooling test Condition					INDOOR UNIT : DB27°C WB19°C OUTDOOR UNIT : DB35°C WB24°C					
Maximum operation Condition					INDOOR UNIT : DB32°C WB23°C OUTDOOR UNIT : DB43°C WB26°C					

1-2 Pressure Graph

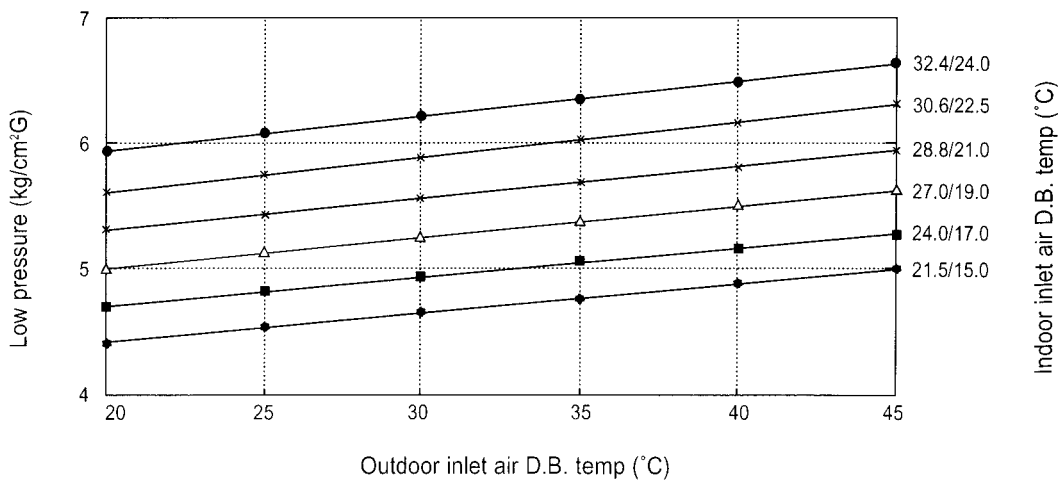
■ 12K BTU



■ 9K BTU



■ 7K BTU



MEMO

2. Operating Instructions

2-1 The Feature of Key in remote control

NO	NAMED OF KEY	FUNCTION OF KEY
1		On/Off & Timer Set/Cancel button. Press the button to stop and run the air conditioner or On/Off timer set up.
2		Mode selection button. Each time you press this button, Mode is changed in the following order. Auto → ❄ → 💧 → 🌀 → ☀ Auto : Auto Mode 🌀 : Fan Only ❄ : Cool Mode ☀ : Heat Mode 💧 : Dry Mode
3	(UP)	Temperature adjustment button(UP). To increase the temperature by the pressing the temperature button.
	(DOWN)	Temperature adjustment button(DOWN). To decrease the temperature by the pressing the temperature button.
4		Turbo/Sleep mode selection button. Press the button one or more times until TURBO appears. The air conditioner cools or heats the room as quickly as possible. After 30minutes, the air conditioner is reset automatically to the previous mode.
		Turbo/Sleep mode selection button. Press the button one or more times until appears. The sleep timer can be used when you are cooling or heating your room to switch the air conditioner off automatically after a period of six hours.
5		Fan speed adjustment button. Each time you press this button, FAN SPEED is changed in the following order. I → II → III → I
6		Swing button. It adjusts the airflow to upward and downward.
7		On Timer button. The On Timer enables you to **switch on** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To cancel, press the (Set/Cancel) button.
8		Off Timer button. The Off Timer enables you to **switch off** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To cancel, press the (Set/Cancel) button.
9	Energy Saving	Energy Saving button. If you wish to save energy when using your air conditioner, select the Energy saving mode with the button.

2-1-1 Name & Function of Key in remote control

1. AUTO MODE : In this mode, operation mode(COOL, HEAT) is selected automatically by the room temperature of initial operation.

Room Temp	Operation Type
Tr ≥ 21°C+ΔT	Cool Operation (Set Temp:24°C+ΔT)
21°C +ΔT>Tr	Heat Operation (Set Temp:22°C+ΔT)

ΔT= -1°C, -2°C, 0°C, +1°C, +2°C
ΔT is controlled by setting temperature up/down key of remote control

2. COOL MODE : The unit operates according to the difference between the setting and room temperature. (18°C~30°C)

3. HEAT MODE : The unit operates according to the difference between the setting and room temperature.(16°C~30°C)
*Prevention against cold wind : In order to prevent the cool air from flowing out at the heat mode, the indoor fan does not operate or operates very slowly in the following cases. At this time, the indoor heat exchanger will be preheating.
- For 3~5 minutes after the initial operation
- For deicing operation
- The operation of an indoor fan in accordance with the temperature of an indoor heat exchanger

The temperature of indoor heat exchanger	Indoor fan speed
below 28°C	off
28°C~below 34°C	LL Speed
34°C~below 40°C	L Speed
above 40°C	Setting Speed

*High temperature release function : It is a function to detect an outdoor overload by the sensor of an indoor heat exchanger and to turn the outdoor fan or the compressor ON/OFF for safety.

*Deice : Deicing operation is controlled by indoor unit's heat exchanger temperature and accumulating time of compressor's operation.
Deice ends by sensing of the processing time by deice condition.

4. DRY MODE : Has 3 states, each determined by room temperature.
The unit operates in DRY mode.
*Compressor ON/OFF Time is controlled compulsorily(can not set up the fan speed, always breeze).
*Protective function : Low temperature release. (Prevention against freeze)

5. TURBO MODE : This mode is available in AUTO, COOL, HEAT, DRY, FAN MODE.
When this button is pressed at first, the air conditioner is operated "powerful" state for 30 minutes regardless of the set temperature, room temperature.
When this button is pressed again, or when the operating time is 30 minutes, turbo operation mode is canceled and returned to the previous mode.
*But, if you press the TURBO button in DRY or FAN mode that is changed with AUTO mode automatically.

6. SLEEP MODE : Sleep mode is available only in COOL or HEAT mode.
The operation will stop after 6 hours.
*In COOL mode : The setting temperature is automatically raised by 1°C each 1hour When the temperature has been raised by total of 2°C, that temperature is maintained.
*In HEAT mode : The setting temperature is automatically dropped by 1°C each 1hour.
When the temperature has been dropped by total of 2°C, that temperature is maintained.

7. FAN SPEED : Manual (3 step), Auto (4 step)
   Fan speed automatically varies depending on both the difference between setting and the room temperature.

8. COMPULSORY OPERATION :
   For operating the air conditioner without the remote control.
   *The air conditioner starts up in the most suitable mode for the room temperature:

Room Temperature	Operating Mode	Temperature Setting
Less than 21°C	Heat	22°C approx.
21°C or above	Cool	24°C approx.

9. SWING : BLADE-H is rotated vertically by the stepping motor.
   *Swing Set : Press the button under the remote control is displayed on LCD the and the blades move up and down. If the one more time press the button, blades location is stop.

10. SETTING THE ON/OFF TIMER. :
    *ON TIMER : The On Timer enables you to switch on the air conditioner automatically after a given period of time. You can set the period of time from 30 minutes to 24 hours.
    *OFF TIMER : The Off Timer enables you to switch off the air conditioner automatically after a given period of time. You can set the period of time from 30 minutes to 24 hours.

11. SELF DIAGNOSIS

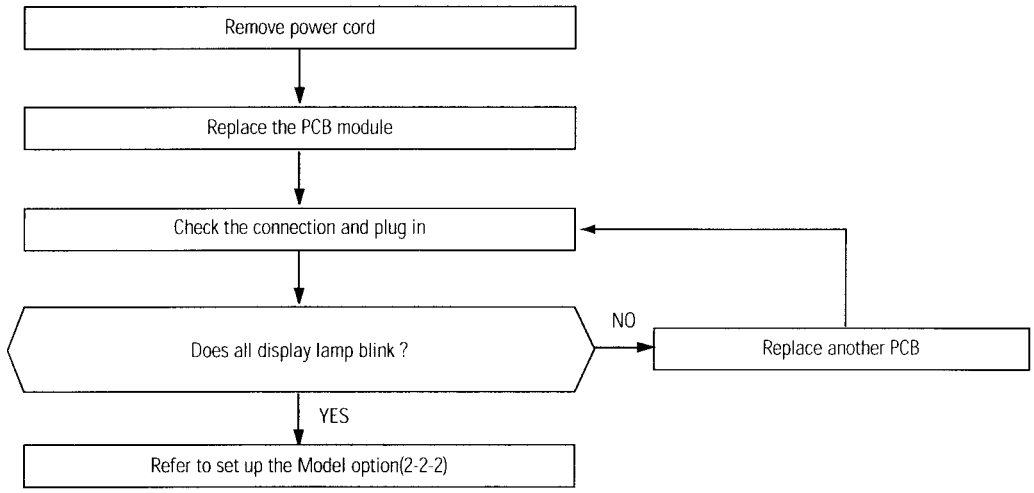
Description	LAMP of DISPLAY Monitor			
	TURBO	OPERATION	TIMER	ENERGY SAVING
	TURBO			
Indoor unit room temperature sensor error(open or short)	○	○	◑	○
Indoor unit heat exchanger temperature sensor error(open or short)	○	◑	◑	○
Indoor fan motor malfunction	○	○	○	◑
EEPROM error	○	◑	◑	◑
Option error(option wasn't set up or option data error)	◑	◑	◑	◑

○ : Lamp off ◑ : Lamp flickering

12. BUZZER SOUND : Whenever the On/Off button is pressed or whenever change occurs to the condition which is set up or select, the compulsory operation mode, buzzer is sounded "beep".

2-2 Replace PCB Model option

2-2-1 Replace PCB model option



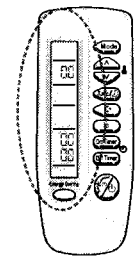
2-2-2 Set up the Model option

The Method for Setting up the model option with remocon

- **It is necessary to set up option code after replacing the main-PCB as a service parts.**
  Make sure that you can set up the option of code the remote controller after you replace the main PBA otherwise, the unit won't be working properly and all LED lamps on display will be flickering.

Step 1 : Preparing the remocon to main PCB option set

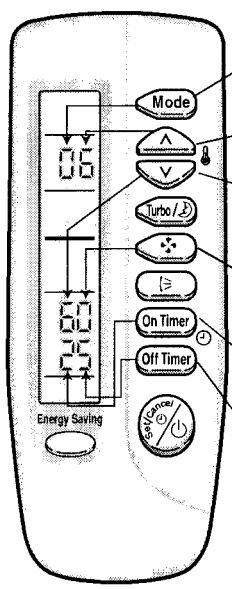
1st Remove the battery from the remocon.
2nd Press the temperature raise/down button simultaneously and insert the battery again.
3rd Make sure the remocon display shown as 00 00 00.



Step 2 : Second stage preparation of the remocon option set.

※ **Note** ; In case the wrong letter has been selected, continue to press the button until the correct letter appears.

1st If the first stage number "0" appears on the display, proceed to the second stage.
2nd Every time the ① and ⑦ button, "0" and "1" each continue to appear.
3rd Whenever pressing the ②, ③, ④, ⑤, ⑥, ⑧, ⑨, ⑩, ⑪, ⑫ button, the number increase from 0~9(0123456789) and A, b, C, d, E, F each time.



① If the first number is 0, it is correct otherwise press Mode until 0 appear.

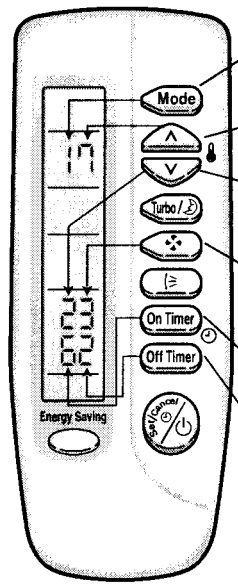
② When pressing the ∧ button 0~F appear on the display, select one of them.

③ When pressing the ∨ button 0~F appear on the display, select one of them.

④ When pressing the fan button 0~F appear on the display, select one of them.

⑤ When pressing the On Timer button 0~F appear on the display, select one of them.

⑥ When pressing the Off Timer button 0~F appear on the display, select one of them.



① If the first number is 1, it is correct otherwise press Mode until 1 appear.

② When pressing the ∧ button 0~F appear on the display, select one of them.

③ When pressing the ∨ button 0~F appear on the display, select one of them.

④ When pressing the Turbo button 0~F appear on the display, select one of them.

⑤ When pressing the On Timer button 0~F appear on the display, select one of them.

⑥ When pressing the Off Timer button 0~F appear on the display, select one of them.

Step 3 : Reconfirming option set after completion

(in case of ex. 066025-172362)

After pressing Mode selector for the 0 mode, the display shown as 06 60 25.
After pressing Mode selector for the 1 mode, the display shown as 17 23 62.

Step 4 : Pressing the ON/OFF button (Set/Cancel)

When pressing the operation ON/OFF key with the direction of remote controller for unit, the sound "Ding" or "Diriring" is heard and the OPERATION LED lamp on the left side is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5 : Unit operation test-run

First, Remove the battery from the remote controller.
Second, Re-insert the battery into the remote controller.
Third, Press ON/OFF key with the direction of remote controller for set.

• Error Mode

1st If all lamps of indoor unit are flickering, Plug out and plug in again and pressing ON/OFF key to retry.

2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for it's model.

■ OPTION ITEMS

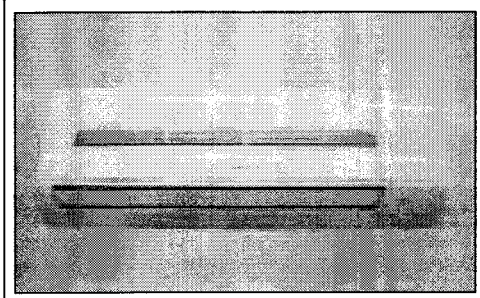
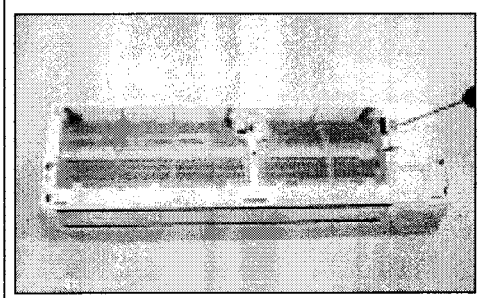
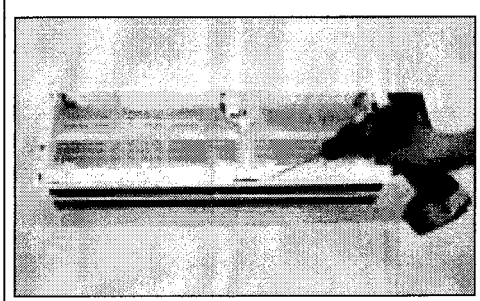
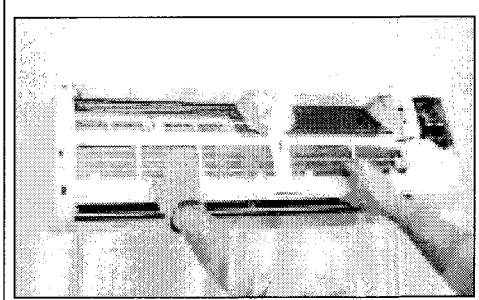
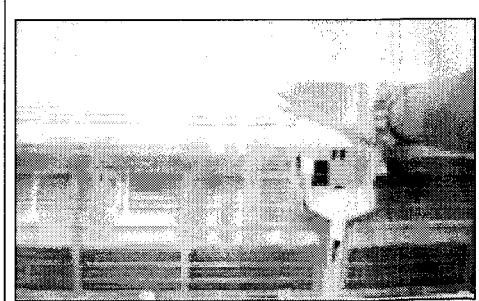
REMOCON / MODEL	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
AQ12SGGE SH12ZSG	0	6	6	0	2	5	1	7	2	3	6	2
AQ12SBGE	0	6	7	0	6	5	1	7	2	3	6	2
AQ09S8GE SH09ZS8	0	2	7	0	6	4	1	7	2	2	1	d
AQ09SBGE	0	2	6	0	6	5	1	7	2	2	2	E
AQ07S8GE SH07ZS8	0	2	6	0	6	4	1	7	2	0	F	b
AQ07SBGE	0	2	6	0	6	5	1	7	2	0	F	b

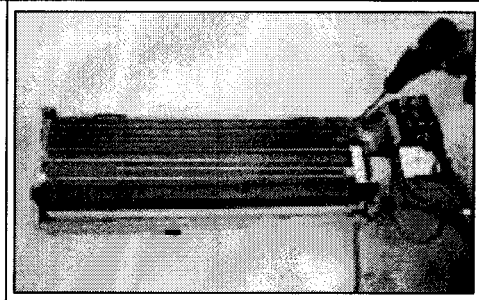
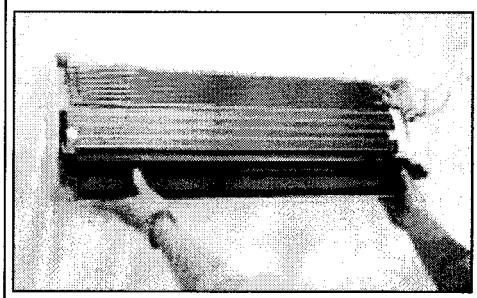
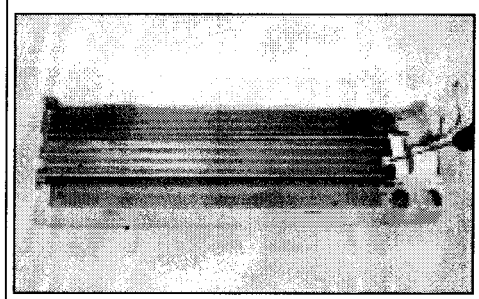
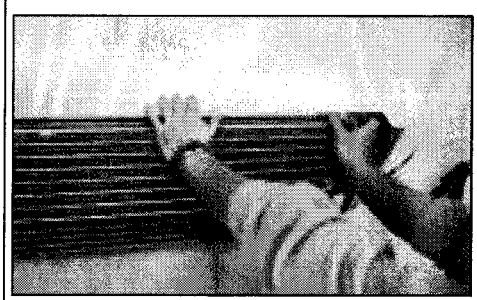
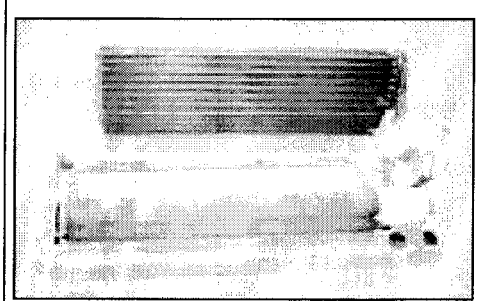
MEMO

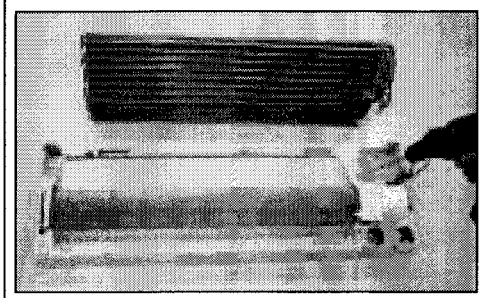
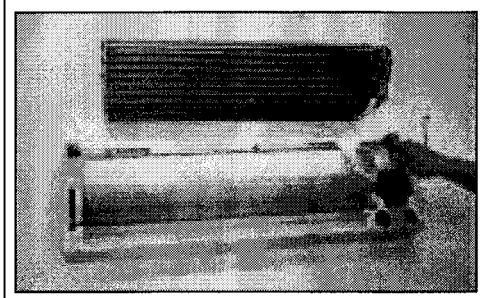
3. Disassembly and Reassembly

Stop operation of the air conditioner and remove the power cord before repairing the unit.

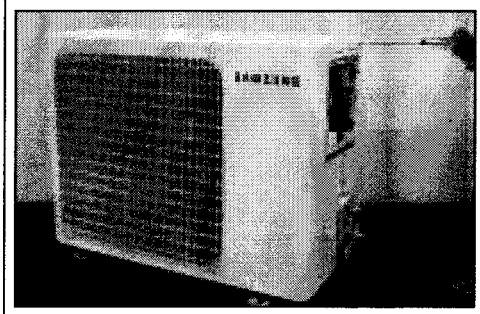
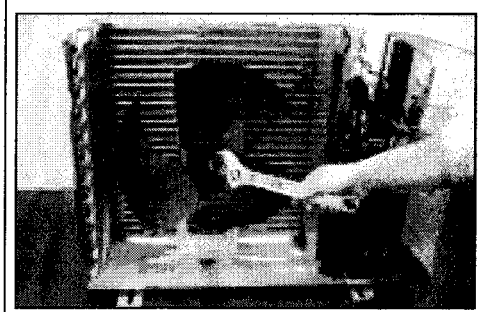
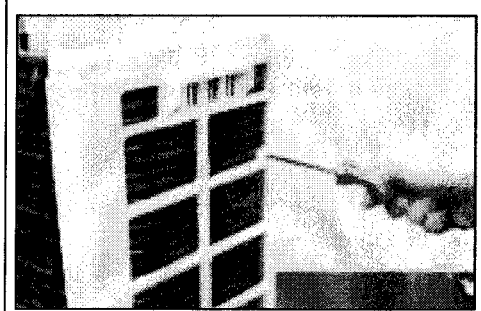
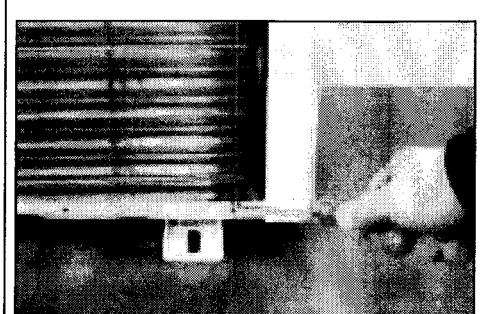
3-1 Indoor Unit

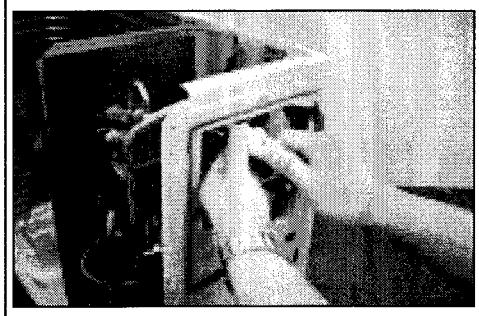
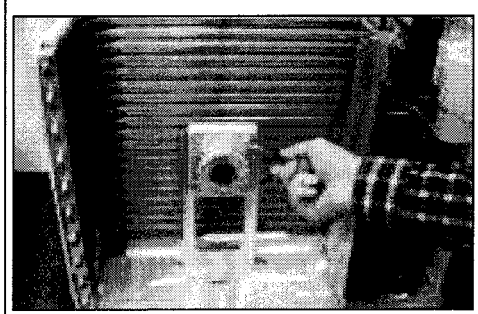
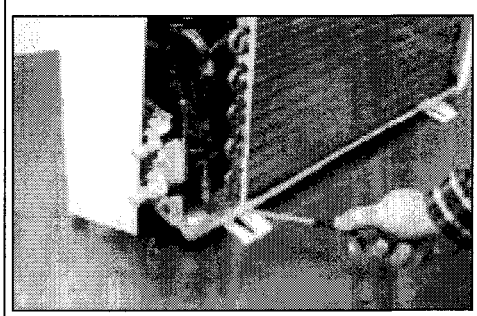
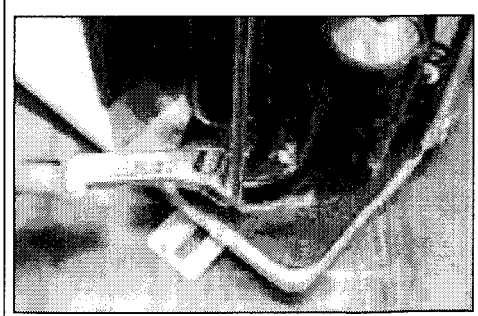
No	Parts	Procedure	Remark
1	Front Panel	1) Stop the air conditioner operation and block the main power. 2) Separate tape of front panel upper.	
		3) Slide the lower front grille down, then disassemble it by pulling it forwards. 4) Open the upper front grille by pulling right and left sides of the grille. 5) Take the left and right filter out. 6) Loosen one of the right screw and separate the terminal cover. 7) Separate the thermistor from the front grille.	
		8) Loosen five fixing screws of front grille.	
		9) Pull the lower left and right of discharge softly for the outside cover to be pulled out.	
		10) In order to disassemble the panel grille, press, in order, the left, center, and right of the upper side of the panel grille with the palm of the hand to remove the hook. And then disassemble the panel grille.	

No	Parts	Procedure	Remark
2	Electrical Parts (Main PCB)	1) Do "1", above. 2) Take all the connector of PCB upper side out. (Inclusion Power cord) 3) Separate the outdoor unit connection wire from the terminal block. 4) If pulling the Main PCB up. It will be taken out.	
3	Ass'y Tray Drain.	1) Do "1", "2", above. Separate the drain hose from the extension drain hose. 2) Pull tray drain out from the back body.	
4	Heat Exchanger	1) Do "1", "2", "3", above. 2) Loosen 2 fixing earth screws of right side. 3) Separate the connection pipe. 4) Separate the holder pipe at the rear side. 5) Loosen 3 fixing screws of right and left side. 6) Separate the heat exchanger from the indoor unit.	  

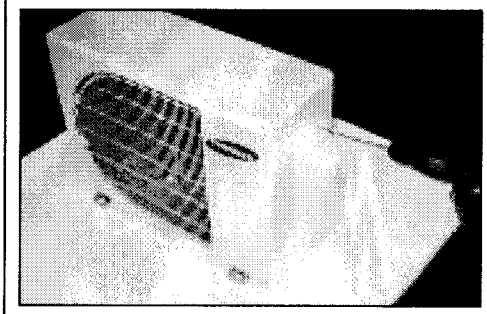
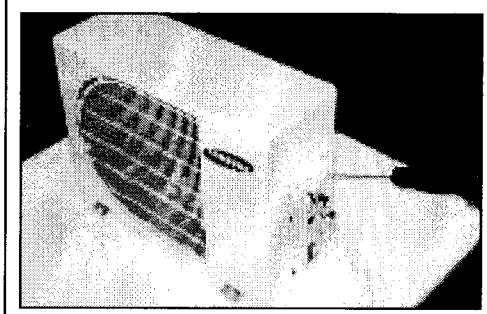
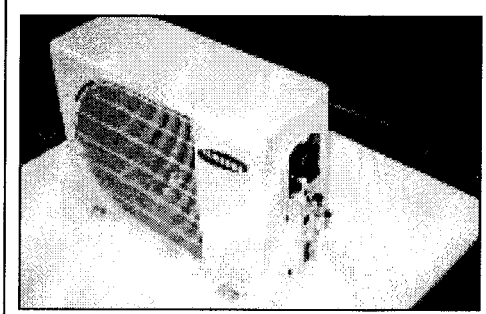
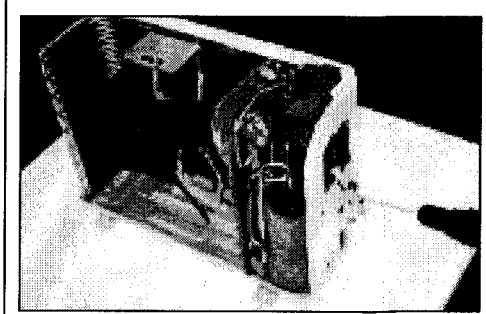
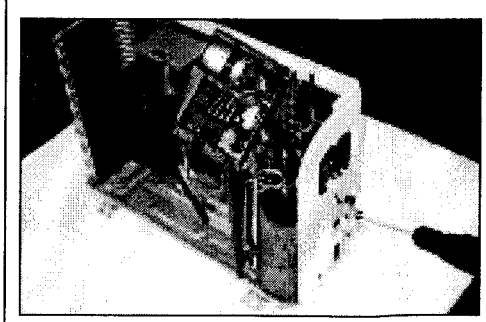
No	Parts	Procedure	Remark
5	Fan Motor and Cross Fan	1) Do "1", "2", "3", "4", above. 2) Loosen 2 fixing screws and separate the motor holder. 3) Loosen 1 screw of fan motor. (M3 wrench) 4) Separate the fan motor from the fan. 5) Separate the fan from the left holder bearing.	 

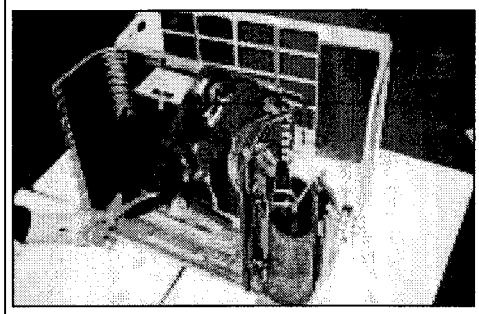
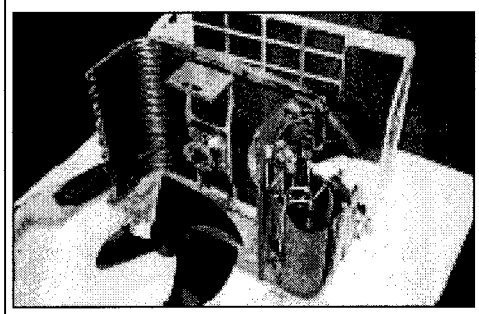
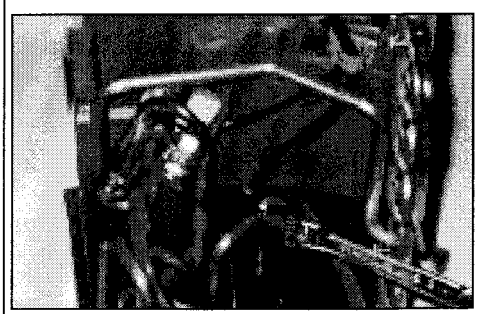
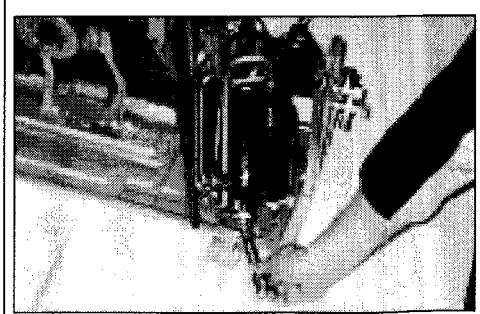
■ SH12ZSGX/UQ12SGGE

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 2 fixing screws and separate the cover valve. 2) Separate the connection wire from the terminal block.	
		3) Loosen 4 fixing screws and separate the cabi front.	
		4) Loosen 2 fixing screws and separate the cabi side LF.	
		5) Loosen 2 fixing screws of the cabi side RH.	
		6) Loosen 2 fixing screws and separate the bar steel.	

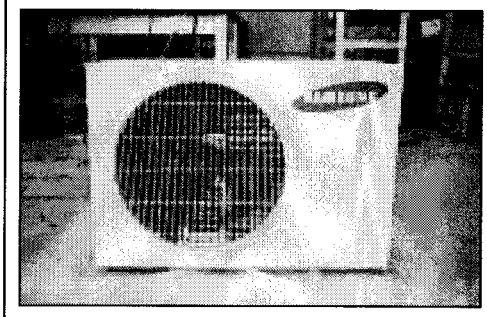
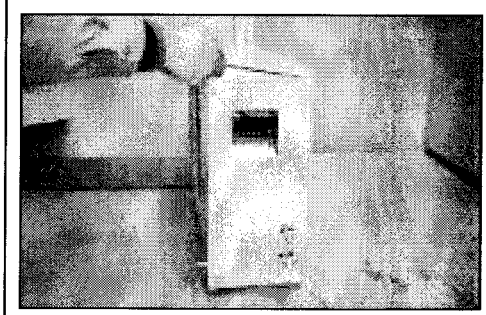
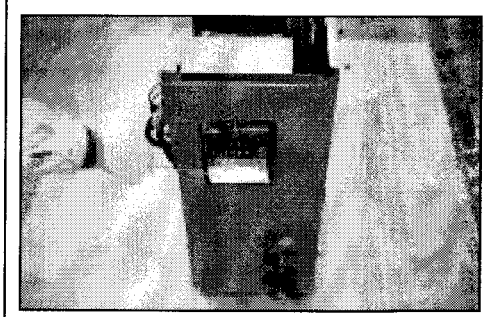
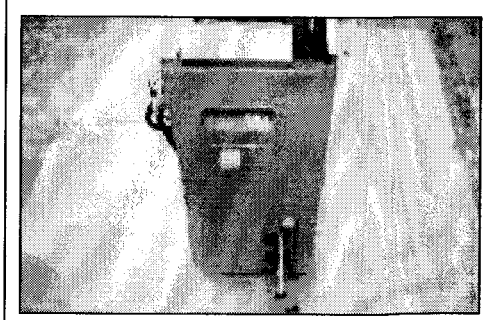
No	Parts	Procedure	Remark
2	Fan and Motor	1) Do "1", above. 2) Separate the connection wire of the motor fan.	
		3) Remove the nut flange. (Turn to the right to remove, as it is a left hand screw) 4) Separate the fan.	
		5) Loosen 4 fixing screws to separate the motor. 6) Loosen 4 fixing screws and separate the motor bracket from the base.	
3	Heat Exchanger	1) Do "1","2", above. 2) Loosen 2 fixing screws of left and right side. 3) Disassemble the inlet and outlet pipe by welding. 4) Separate the heat exchanger.	
4	Compressor	1) Do "1","2","3", above. 2) Open the terminal cover of compressor and unscrew the connection terminal. 3) Disassemble the inlet and outlet pipe of compressor by welding. 4) Loosen 3 fixing bolts of the lower part. 5) Separate the compressor.	

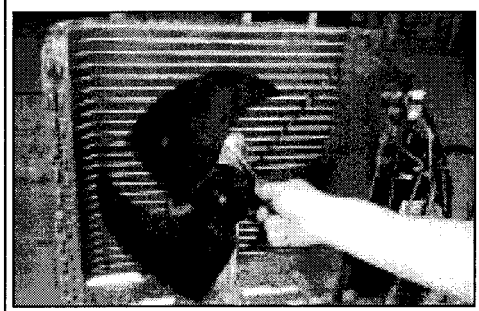
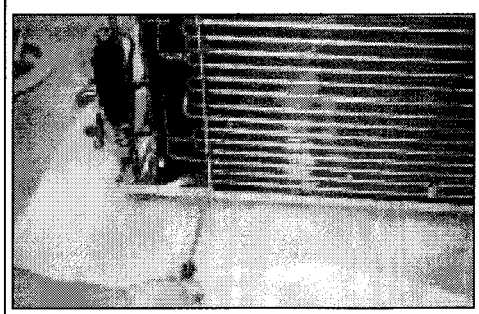
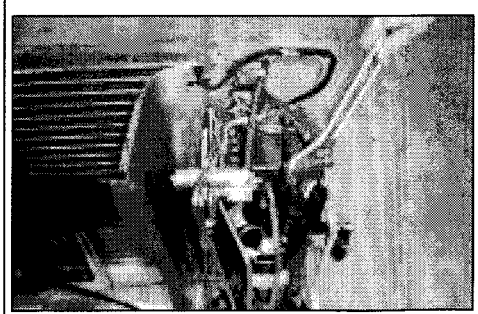
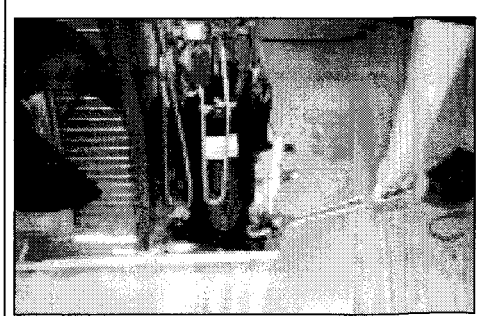
■ SH09ZS8X / SH07ZS8X / UQ09S8GE / UQ07S8GE

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 2 fixing screws and separate the cover terminal.	
		2) Loosen 2 fixing screws and separate the cover control. 3) Separate the connection wire from the terminal block.	
		4) Loosen 6 fixing screws and separate the cabi front.	
		5) Loosen 1 fixing screw of assy E-part.	
		6) Loosen 12 fixing screws and separate the cabi side.	

No	Parts	Procedure	Remark
2	Fan and Motor	1) Do "1", above. 2) Remove the nut flange (Turn to the right to remove, as it is a left hand screw) 3) Separate the fan. 4) Loosen 4 fixing screws to separate the motor. 5) Loosen 2 fixing screws and separate the motor bracket from the base.	 
3	Heat Exchanger	1) Do "1","2", above. 2) Loosen 2 fixing screws of left and right side. 3) Disassemble the inlet and outlet pipe by welding. 4) Separate the heat exchanger.	
4	Compressor	1) Do "1", "2", "3", above. 2) Open the terminal cover of compressor and unscrew the connection terminal. 3) Disassemble the inlet and outlet pipe of compressor by welding. 4) Loosen 3 bolts of the lower part. 5) Separate the compressor.	 

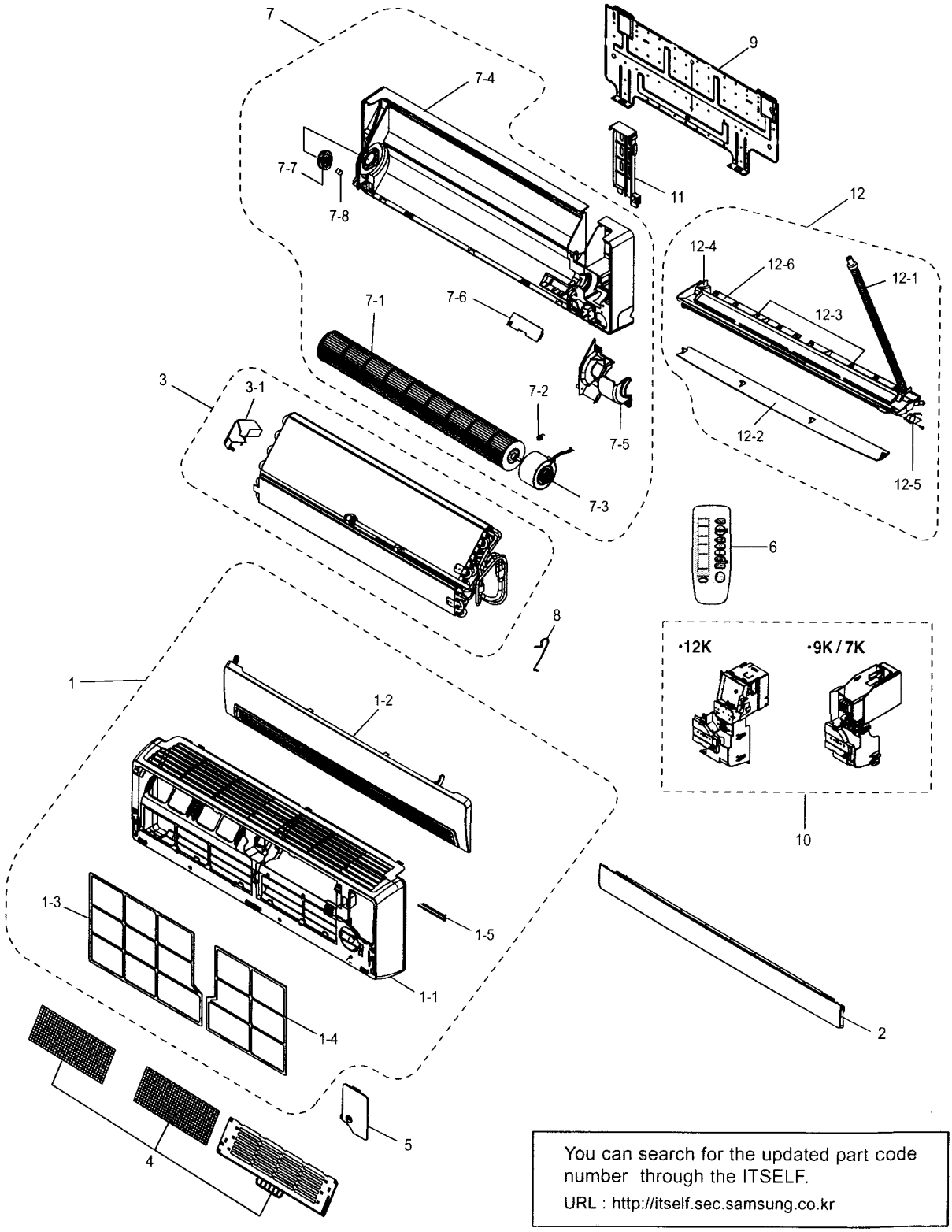
■ UQ12SBGB / UQ09SBGE / UQ07SBGE

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 1 fixing screw and separate the cover terminal.	
		2) Loosen 1 fixing screw and separate the cover control. 3) Separate the connection wire from the terminal block.	
		4) Loosen 13 fixing screws and separate the cabi front.	
		5) Loosen 1 fixing screw of Ass'y E-part.	
		6) Loosen 4 fixing screws and separate the cabi side.	

No	Parts	Procedure	Remark
2	Fan and Motor	1) Do "1", above. 2) Remove the nut flange (Turn to the right to remove, as it is a left hand screw). 3) Separate the fan. 4) Loosen 4 fixing screws to separate the motor. 5) Loosen 5 fixing screws and separate the motor bracket from the base.	 
3	Heat Exchanger	1) Do "1","2", above. 2) Loosen 2 fixing screws of left and right side. 3) Disassemble the inlet and outlet pipe by welding. 4) Separate the heat exchanger.	
4	Compressor	1) Do "1","2","3", above. 2) Open the terminal cover of compressor and unscrew the connection terminal. 3) Disassemble the inlet and outlet pipe of compressor by welding. 4) Loosen 3 bolts of the lower part. 5) Separate the compressor.	 

4. Exploded Views and Parts List

4-1 Indoor Unit



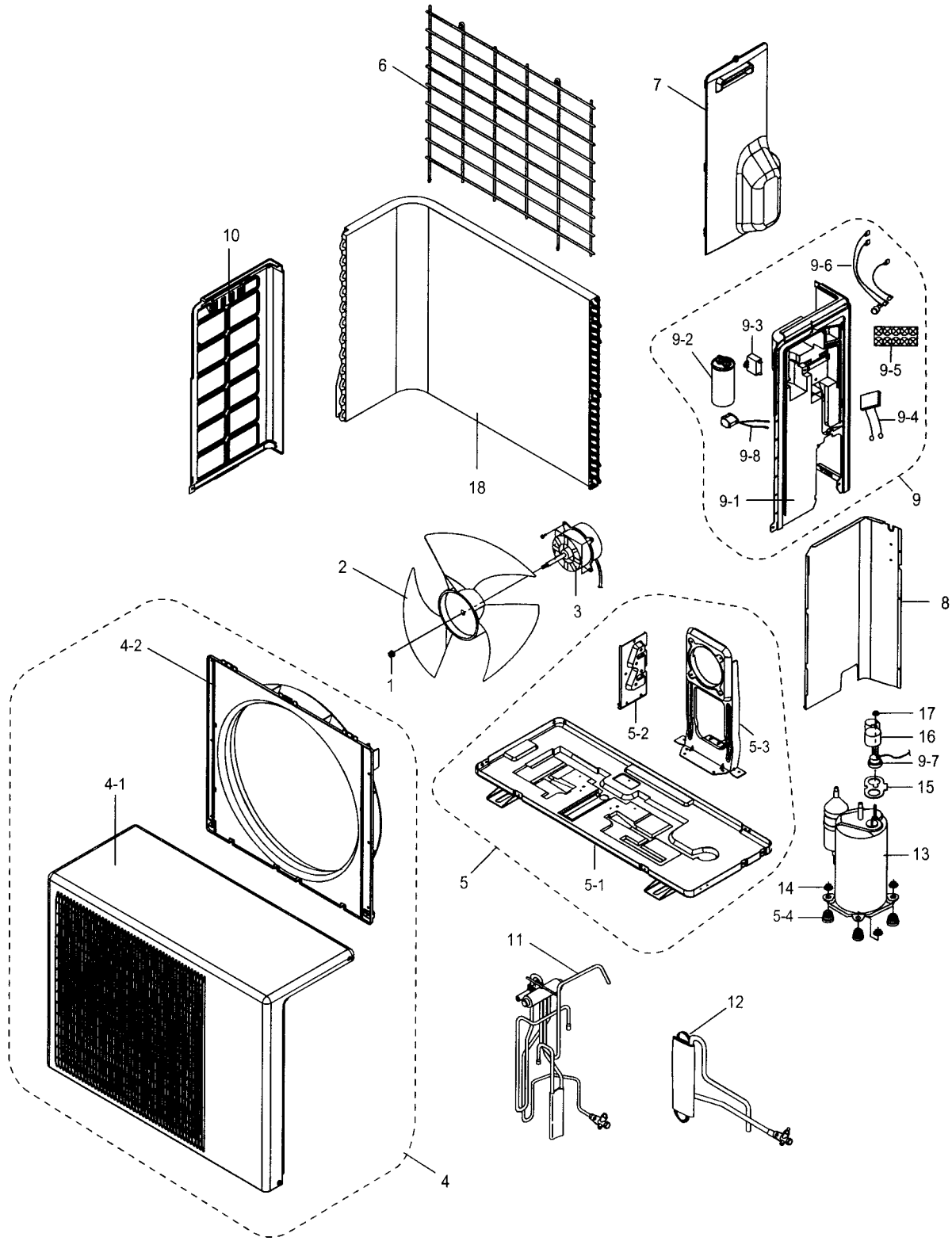
You can search for the updated part code number through the ITSELF.

URL : http://itself.sec.samsung.co.kr

■ Indoor Unit Parts List

No.	Code No.	Description	Specification	Q'TY			Remark
				AQ12SGGE AQ12SBGE SH12ZSG	AQ09S8GE AQ09SBGE SH09ZS8	AQ07S8GE AQ07SBGE SH07ZS8	
1	DB92-00345C	ASSY PANEL FRONT TOTAL	ASSY	1	-	-	
	DB92-00357C	ASSY PANEL FRONT TOTAL	ASSY	-	1	1	
1-1	DB92-00346A	ASSY PANEL FRONT SUB	ASSY	1	-	-	
	DB92-00356A	ASSY PANEL FRONT SUB	ASSY	-	1	1	
1-2	DB64-00456A	ASSY GRILLE UP	ASSY	1	-	-	
	DB64-00457A	ASSY GRILLE UP	ASSY	-	1	1	
1-3	DB63-00585A	FILTER-AIR LF	PP	1	-	-	
	DB63-00590A	FILTER-AIR LF	PP	-	1	1	
1-4	DB63-00586A	FILTER-AIR RH	PP	1	-	-	
	DB63-00591A	FILTER-AIR RH	PP	-	1	1	
1-5	DB64-00646A	WINDOW DISPLAY	PC	1	1	1	
2	DB92-00347A	ASSY GRILLE LOW SUB	ASSY	1	-	-	
	DB92-00355A	ASSY GRILLE LOW SUB	ASSY	-	1	1	
3	DB96-02092A	ASSY EVAPORATOR	ASSY	1	-	-	
	DB96-02145A	ASSY EVAPORATOR	ASSY	-	1	1	
3-1	DB63-00667A	COVER DRAIN	PP	1	-	-	
	DB63-00716A	COVER DRAIN	PP	-	1	1	
4	DB95-00367G	ASSY FILTER BIO	ASSY	1	1	1	Option
5	DB63-00581A	COVER TERMINAL	HIPS	1	-	-	
	DB63-00588A	COVER TERMINAL	HIPS	-	1	1	
6	DB93-01364B	ASSY REMOCON	ASSY	1	1	1	
7	DB94-00256A	ASSY BACK BODY	ASSY	1	-	-	
	DB94-00268A	ASSY BACK BODY	ASSY	-	1	1	
7-1	DB94-00040R	ASSY CROSS FAN	ASSY	1	-	-	
	DB94-00040F	ASSY CROSS FAN	ASSY	-	1	1	
7-2	DB60-20011A	BOLT SPECIAL	-	1	1	1	
7-3	DB31-00152B	MOTOR-FAN IN	-	1	-	-	
	DB31-00152A	MOTOR-FAN IN	-	-	1	1	
7-4	DB94-00261A	ASSY BACK BODY SUB	ASSY	1	-	-	
	DB94-00269A	ASSY BACK BODY SUB	ASSY	-	1	1	
7-5	DB61-01099A	HOLDER-MOTOR	PP	1	-	-	
	DB61-01120A	HOLDER-MOTOR	PP	-	1	1	
7-6	DB63-00580A	COVER-IONIZER	HIPS	1	1	1	
7-7	DB73-00128A	BEARING MOLD	-	1	1	1	
7-8	DB94-40007A	BEARING	-	1	1	1	
8	DB67-60030A	SPRING SENSOR	-	1	1	1	
9	DB70-00276A	HANGER PLATE	SGCC-M	1	-	-	
	DB70-00288A	HANGER PLATE	SGCC-M	-	1	1	
10	-	ASSY CONTROL IN	ASSY	1	1	1	Refer to 4-3
11	DB90-00992A	ASSY HOLDER-PIPE	ASSY	1	-	-	
	DB61-01121A	HOLDER-PIPE	HIPS	-	1	1	
12	DB94-00259A	ASSY TRAY DRAIN	ASSY	1	-	-	Option
	DB94-00259E	ASSY TRAY DRAIN	ASSY	1	-	-	
	DB94-00265A	ASSY TRAY DRAIN	ASSY	-	1	1	Option
	DB94-00265D	ASSY TRAY DRAIN	ASSY	-	1	1	
12-1	DB94-00062E	ASSY HOSE DRAIN	ASSY	1	1	1	
12-2	DB61-01103A	BLADE-H	HIPS	1	-	-	
	DB61-01125A	BLADE-H	HIPS	-	1	1	
12-3	DB61-01104A	BLADE-V	PP	1	-	-	
	DB61-01126A	BLADE-V	PP	-	1	1	
12-4	DB63-00587A	TRAY DRAIN	HIPS	1	-	-	
	DB63-00592A	TRAY DRAIN	HIPS	-	1	1	
12-5	DB95-20138A	ASSY STEPPING MOTOR	ASSY	1	1	1	
12-6	DB63-00634A	GUARD-SAFETY WIRE	-	1	-	-	Option
	DB63-00635A	GUARD-SAFETY WIRE	-	-	1	1	Option

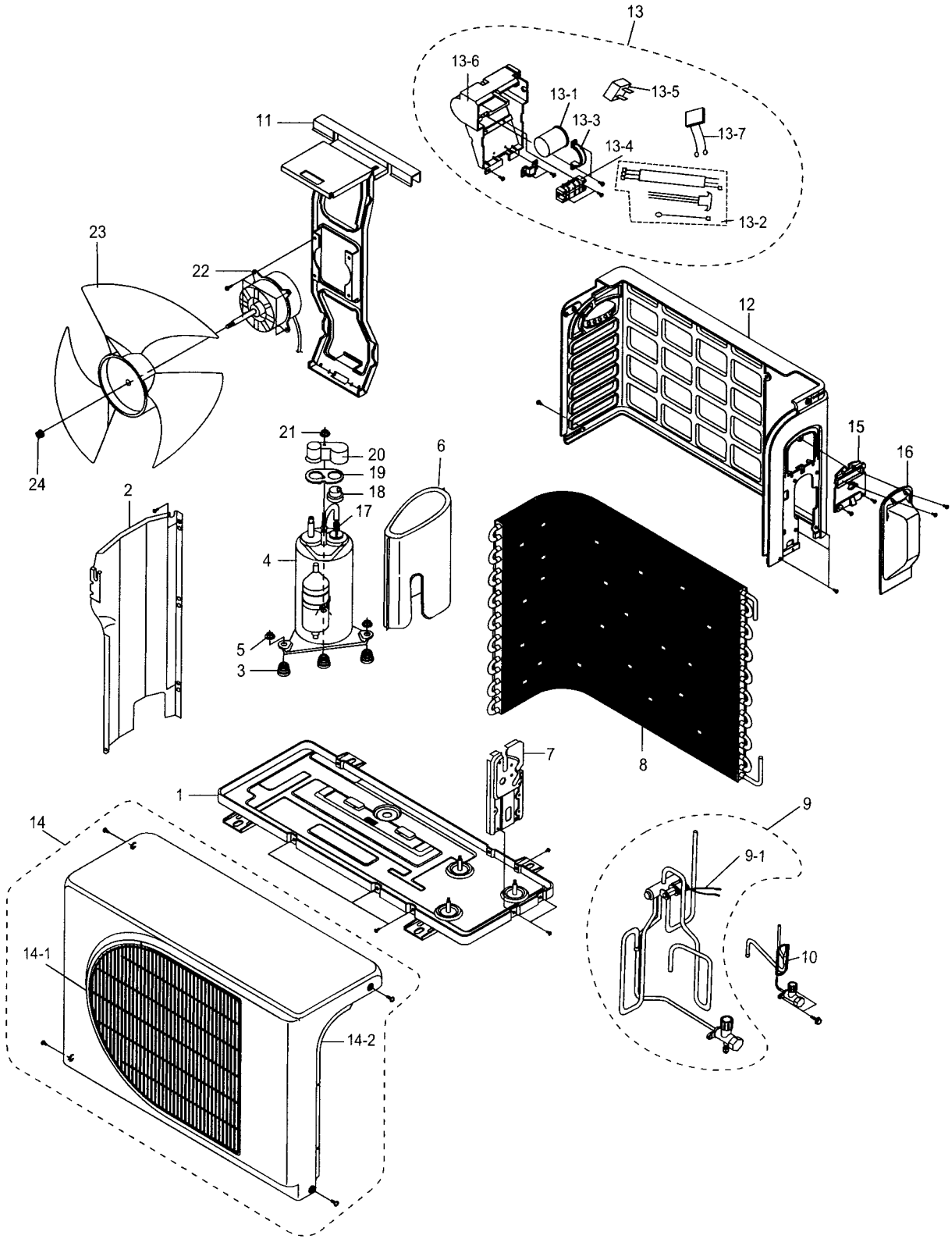
■ SH12ZSGX/UQ12SGGE



■ Outdoor Unit Parts List

No.	Code No.	Description	Specification	Q'TY
				SH12ZSGX UQ12SGGE
1	DB60-30020A	NUT FLANGE	2C, M6, SM20C, NTR	1
2	DB67-50063A	FAN PROPELLER	AS+G/F 20%, ø405	1
3	DB31-10058C	MOTOR FAN OUT	220/240V, 50/60Hz	1
4	DB90-00904A	ASSY CABI FRONT	ASSY	1
4-1	DB64-00648A	CABI FRONT	PP	1
4-2	DB61-01113A	BELL MOUTH	PP	1
5	DB90-01057F	ASSY BASE OUTDOOR	ASSY	1
5-1	DB90-01056C	ASSY BASE OUT	ASSY	1
5-2	DB61-01322A	ASSY BRACKET VALVE	GA	1
5-3	DB94-00278A	ASSY BRACKET MOTOR	ASSY, SGCC-M	1
5-4	DB73-10004B	ASSY GROMMET ISOLATOR	SILICON	3
6	DB71-00085A	BAR STEEL	-	1
7	DB90-00947A	ASSY COVER VALVE	ASSY	1
8	DB94-00303A	ASSY PARTITION	ASSY, SGCC-M	1
9	DB90-00914A	ASSY CABISIDE RH	ASSY	1
9-1	DB64-00650A	CABISIDE RH	PP	1
9-2	2501-001236	CAPACITOR-COMP	30μF / 450VAC	1
9-3	2301-001375	CAPACITOR-MOTOR	1.5μF / 450VAC	1
9-4	DB95-90026G	ASSY-SPARK KILLER	ASSY	1
9-5	DB65-40049E	TERMINAL BLOCK	4P	1
9-6	DB93-01547A	ASSY LEAD WIRE	ASSY	1
9-7	DB35-00015H	OLP	RAC12074-9622	1
9-8	DB33-00028A	ASSY SOLENOID COIL	ASSY	1
10	DB90-01001A	ASSY CABINET SIDE LF	ASSY	1
11	DB96-02414A	ASSY 4WAY VALVE	ASSY, SHF-4-23U	1
12	DB96-02413A	ASSY CHECK VALVE	ASSY, ø9.52	1
13	48D129JU1EL	COMPRESSOR	220~240V / 50Hz	1
14	DB60-30028A	NUT WASHER	HEX2CM8ZPC	3
15	DB63-20002A	GASKET	SILICON	1
16	DB63-10165D	COVER TERMINAL	PBT	1
17	DB60-30018A	NUT FLANGE	M5, SM20C	1
18	DB96-02104A	ASSY CONDENSER	ASSY	1

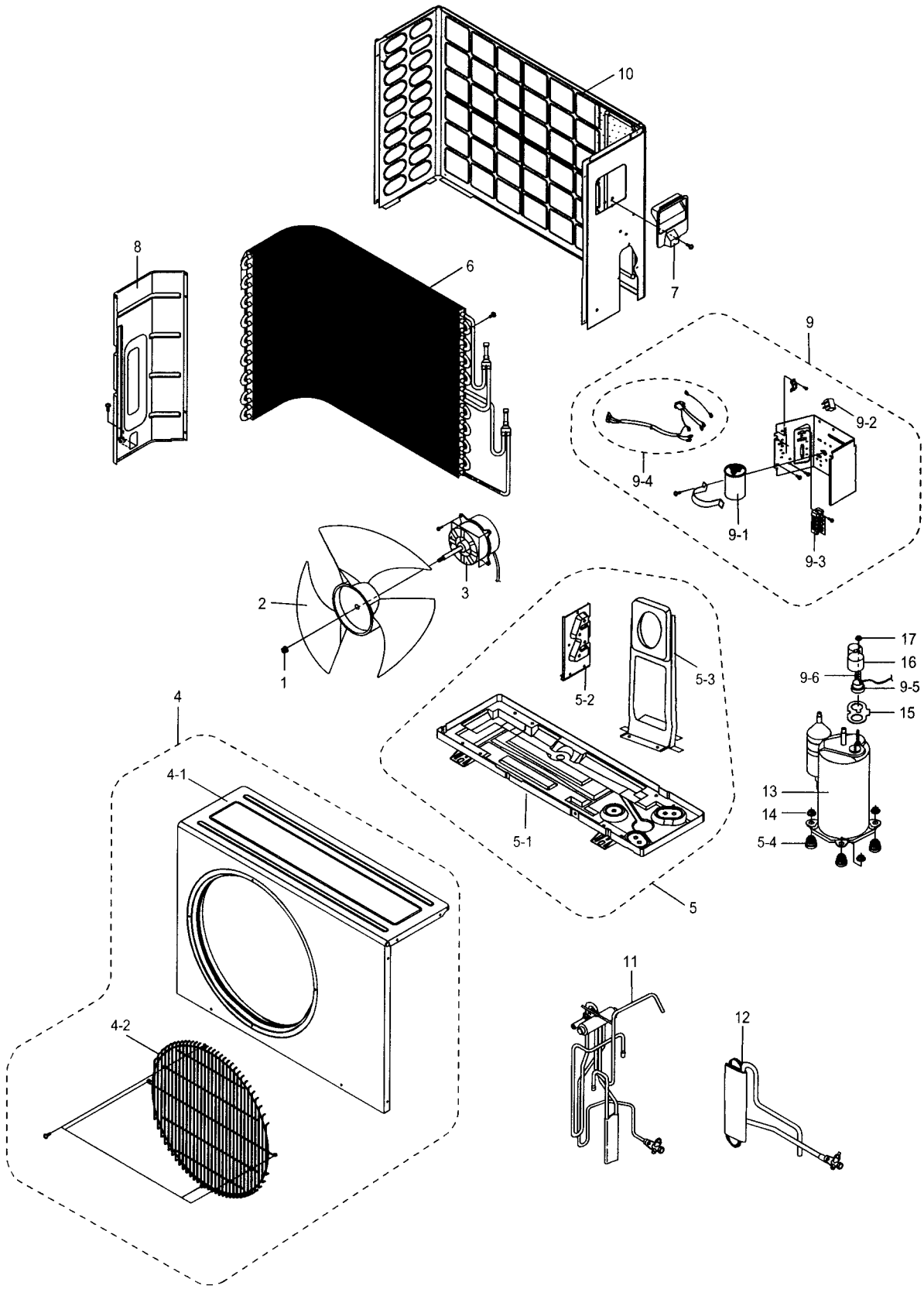
■ SH09ZS8X / SH07ZS8X / UQ09S8GE / UQ07S8GE



■ **Outdoor Unit Parts List**

No.	Code No.	Description	Q'TY	
			SH09ZS8X UQ09S8GE	SH07ZS8X UQ07S8GE
1	DB90-00262A	ASSY BASE OUT	1	1
2	DB94-00271A	ASSY PARTITION; 7K,9K	1	1
3	DB73-10004B	GROMMET ISOLATOR(SILICON)	3	3
4	44B102JX1EL	ROTARY COMP	1	-
	44B080JX1EL	ROTARY COMP	-	1
5	DB60-30028A	NUT WASHER	3	3
6	DB72-00453A	CLOTH COMP SOUND	1	1
7	DB61-00793A	BRAKET VALVE	1	1
8	DB96-02142A	ASSY CONDENSER	1	-
	DB96-02472A	ASSY CONDENSER	-	1
9	DB99-00277A	ASSY 4WAY VALVE	1	1
9-1	DB33-00002B	ASSY SOLENOID COIL	1	1
10	DB96-02470A	ASSY TUBE CAPLLARY	1	-
	DB96-02470B	ASSY TUBE CAPLLARY	-	1
11	DB90-00110A	ASSY BRACKET MOTOR	1	1
12	DB90-00109C	ASSY CABI SIDE	1	1
13	DB93-00666C	ASSY CONTROL OUT(9K 2 Stage OLP)	1	-
	DB93-00666D	ASSY CONTROL OUT(7K 2 Stage OLP)	-	1
13-1	2501-001238	C OIL;40μF, 450VAC	1	-
	2501-001236	C OIL;30μF, 450VAC	-	1
13-2	DB93-00481D	ASSY-LEAD WIRE 2 Stage OLP	1	1
13-3	DB61-01102A	HOLDER CAPACITOR	1	1
13-4	DB65-40049E	TERMINAL BLOCK;4P	1	1
13-5	2301-001375	C FILM;1.5μF, 450VAC	1	1
13-6	DB61-01196A	CASE CONTROL OUT	1	1
13-7	DB95-90026G	ASSY-SPARK KILLER	1	1
14	DB90-00108F	ASSY CABI FRONT	1	1
14-1	DB63-00099A	GUARD FAN WIRE	1	1
14-2	DB64-00086A	CABINET FRONT	1	1
15	DB90-00152A	ASSY COVER CONTROL	1	1
16	DB94-00021A	ASSY COVER VALVE	1	1
17	DB67-60020A	SPRING OLP	1	1
18	DB35-00020G	PROTECTOR O/L; RAC12110-9622, 2 Stage OLP	1	-
	DB35-00020A	PROTECTOR O/L; RAC12144-9622, 2 Stage OLP	-	1
19	DB63-20002A	GASKET;EPDM	1	1
20	DB63-10165D	COVER TERMINAL	1	1
21	DB60-30018A	NUT FLANGE	1	1
22	DB31-00034A	MOTOR FAN OUT	1	1
23	DB67-00036A	FAN PROPELLER	1	1
24	DB60-30020A	NUT FLANGE	1	1

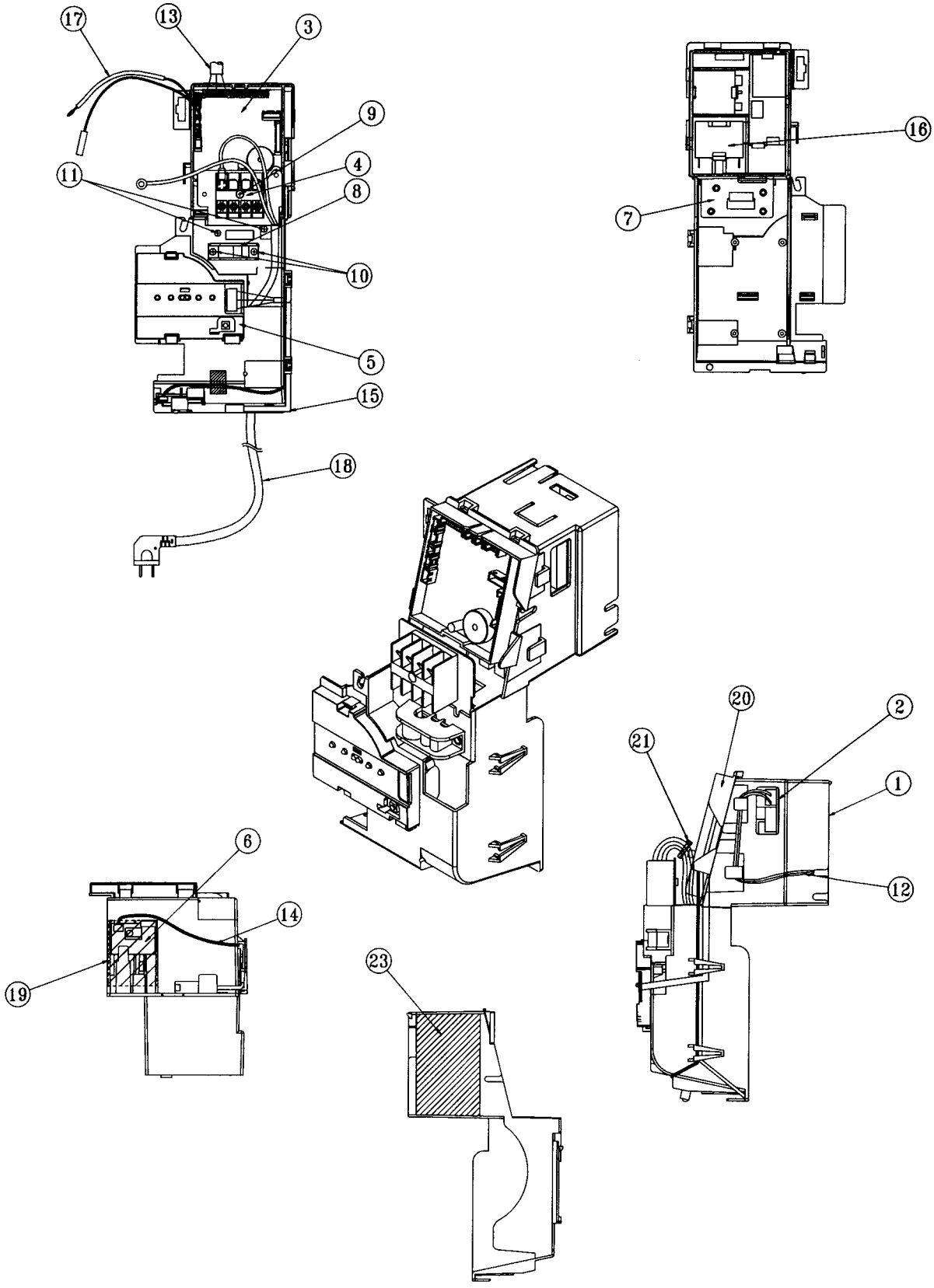
■ UQ12SBGE / UQ09SBGE / UQ07SBGE



■ Outdoor Unit Parts List

No.	CODE NO	Description	Specification	Q'TY		
				UQ12SBGE	UQ09SBGE	UQ07SBGE
1	DB60-30020A	NUT FLANGE	2C SM20C M6 NTR	1	1	1
2	DB67-50063A	PROPELLER-FAN	AS+G/F, ø405	1	1	1
3	DB31-10058C	MOTOR FAN OUT	220/240V, 60/50Hz	1	1	1
4	DB90-00633E	ASSY CABI FRONT	ASSY	1	1	1
4-1	DB64-00439A	CABINET FRONT	SECC-P, T0.8	1	1	1
4-2	DB63-00385B	GUARD FAN	HSWR, OD 2.0	1	1	1
5	DB90-00687D	ASSY BASE OUTDOOR	ASSY	1	-	-
	DB90-00687C	ASSY BASE OUTDOOR	ASSY	-	1	1
5-1	DB90-00635B	ASSY BASE OUT	ASSY	1	-	-
	DB90-00635A	ASSY BASE OUT	ASSY	-	1	1
5-2	DB61-00887A	BRACKET VALVE	SECC-P, T1.6	1	1	1
5-3	DB61-00802A	BRACKET MOTOR	SGCC-M, T1.2	1	1	1
5-4	DB73-00067A	GROMMET-ISOLATOR	NR	3	-	-
	DB73-00070A	GROMMET-ISOLATOR	NR	-	3	3
6	DB96-01461A	ASSY COND	ASSY	1	-	-
	DB96-01614A	ASSY COND	ASSY	-	1	1
7	DB63-10443C	COVER-E, PARTS	ABS	1	1	1
8	DB94-00163A	ASSY PARTITION	ASSY	1	-	-
	DB94-00163B	ASSY PARTITION	ASSY	-	1	1
9	DB93-01741A	ASSY CONTROL OUT	ASSY	1	-	-
	DB93-01741B	ASSY CONTROL OUT	ASSY	-	1	-
	DB93-01741C	ASSY CONTROL OUT	ASSY	-	-	1
9-1	2501-001236	CAPACITOR COMP	30µF 450VAC	1	-	1
	2501-001238	CAPACITOR COMP	40µF 450VAC	-	1	-
9-2	2301-001375	CAPACITOR MOTOR	1.5µF 450VAC	1	1	1
9-3	DB65-40049E	TERMINAL BLOCK	4P, (N1), 1, 2, 3, AWG16	1	1	1
9-4	DB93-00481A	ASSY LEAD WIRE	ASSY	1	1	1
9-5	DB35-00015H	O L P	RAC12074-9622	1	-	-
	DB35-00020G	O L P	RAC12110-9622	-	1	-
	DB35-00020A	O L P	RAC12144-9622	-	-	1
9-6	DB67-60020A	O L P SPRING	STS304	1	1	1
10	DB90-00634A	CABINET SIDE	ASSY(BENDING)	1	1	1
11	DB96-02567A	ASSY TUBE 4WAY VALVE	ASSY	1	-	-
	DB96-02642A	ASSY TUBE 4WAY VALVE	ASSY	-	1	1
12	DB96-00157H	ASSY TUBE CAPILLARY	ASSY	1	-	-
	DB96-01547Q	ASSY TUBE CAPILLARY	ASSY	-	1	-
	DB96-01547R	ASSY TUBE CAPILLARY	ASSY	-	-	1
13	48D129JU1EL	COMPRESSOR	220-240V/50Hz	1	-	-
	44B102JX1EL	COMPRESSOR	220-240V/50Hz	-	1	-
	44B080JX1EL	COMPRESSOR	220-240V/50Hz	-	-	1
14	DB60-30028A	NUT-WASHER	HEX 2C MB ZPC	3	3	3
15	DB63-20002A	GASKET	EPDM	1	1	1
16	DB63-10165D	COVER TERMINAL	PBT	1	1	1
17	DB60-30018A	NUT-FLANGE	M5, SM20C	1	1	1

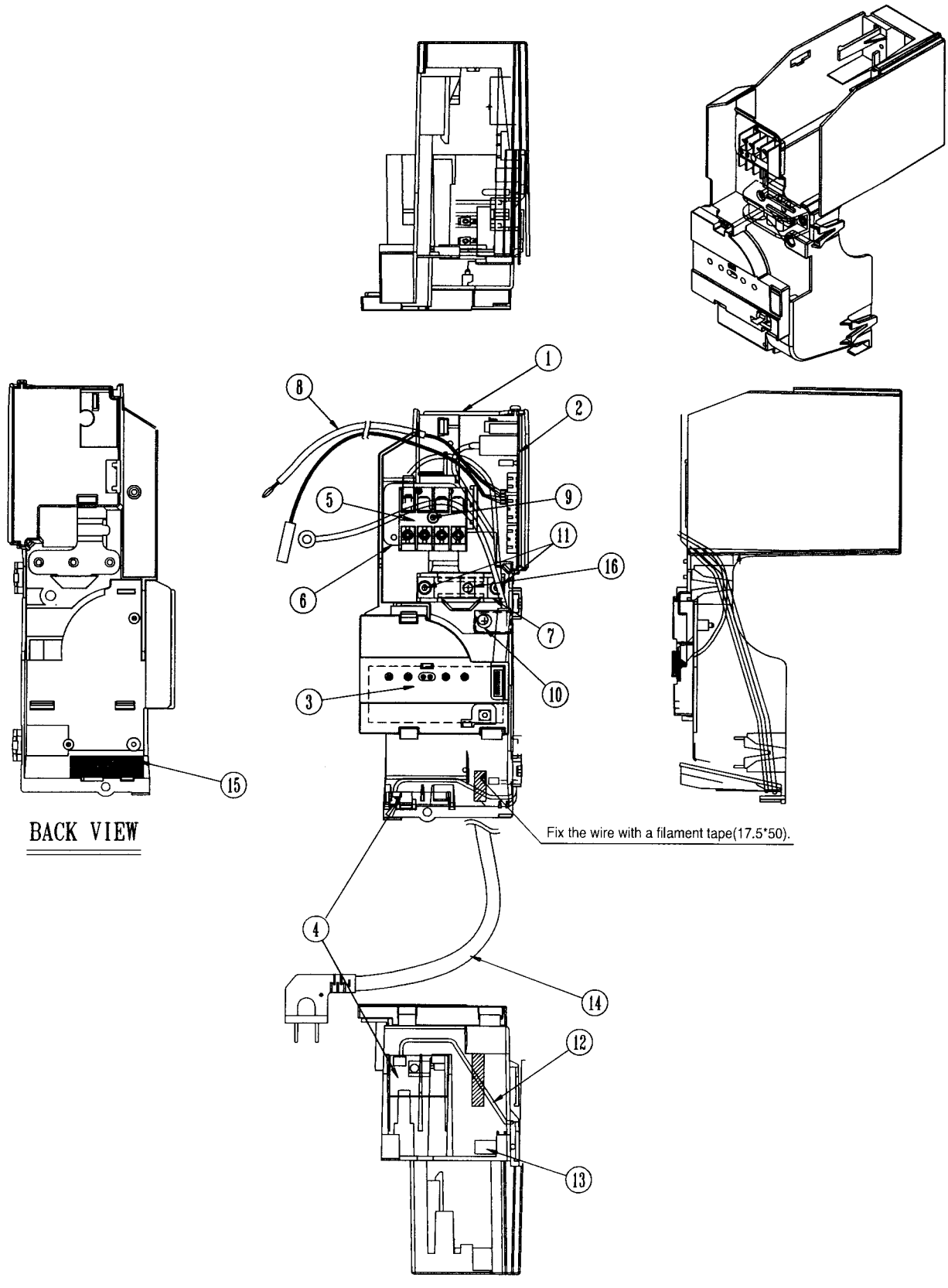
■ AQ12SGGE / AQ12SBGE / SH12ZSG : DB93-01453A



■ Parts List

No.	Code No.	Description	Specification	Q'TY	Remark
1	DB61-01105A	CASE-CONTROL AC	HIPS V0	1	
2	DB93-01324A	ASSY-MAIN PCB (AC)	ASSY	1	
3	DB93-01325A	ASSY-MAIN PCB (DC)	ASSY	1	
4	DB65-00103A	ASSY-TERMINAL BLOCK	ASSY	1	
5	DB93-01367A	ASSY-S/W & DISPLAY PCB	ASSY	1	
6	DB93-01369A	ASSY-MODULE PCB	ASSY	1	
7	DB70-00277A	PLATE-TERMINAL LOW	SGCC-M, T1.2	1	
8	DB61-00171A	HOLDER-WIRE CLAMP	ABS	1	
9	-	SCREW-MACHINE	PH M3 x L22	1	SNA
10	-	SCREW-MACHINE	TH M4 x L16	2	SNA
11	-	SCREW-MACHINE	TH M4 x L10	2	SNA
12	DB93-01386A	ASSY-C/W MOTOR CAPACITOR	ASSY	1	
13	DB93-01384A	ASSY-C/W AC/DC CONNECTION	ASSY	1	
14	DB93-01380A	ASSY-C/W MODULE PCB	ASSY	1	
15	DB39-00643F	C/W STEP MOTOR UP/DOWN	ASSY	1	
16	2301-001377	CAPACITOR	1.2uF, 450VAC	1	
17	DB32-00020G	ASSY-THERMISTOR	4P (103AT)	1	
18	DB93-01549A	POWER CORD	250V, 10/16A	1	
19	DB62-01368X	SEAL	61x40x3, 30FOAM-PE	1	
20	DB61-01106A	CASE CONTROL(DC)	HIPS V0	1	
21	6501-000123	CABLE TIE	DA-140	1	
22	-	-	-	-	
23	DB62-01567V	SEAL	95x60x1, FOAM-LEX	1	

■ AQ09S8GE / AQ07S8GE, AQ09SBGE / AQ07SBGE, SH09ZS8 / SH07ZS8 : DB93-01523A

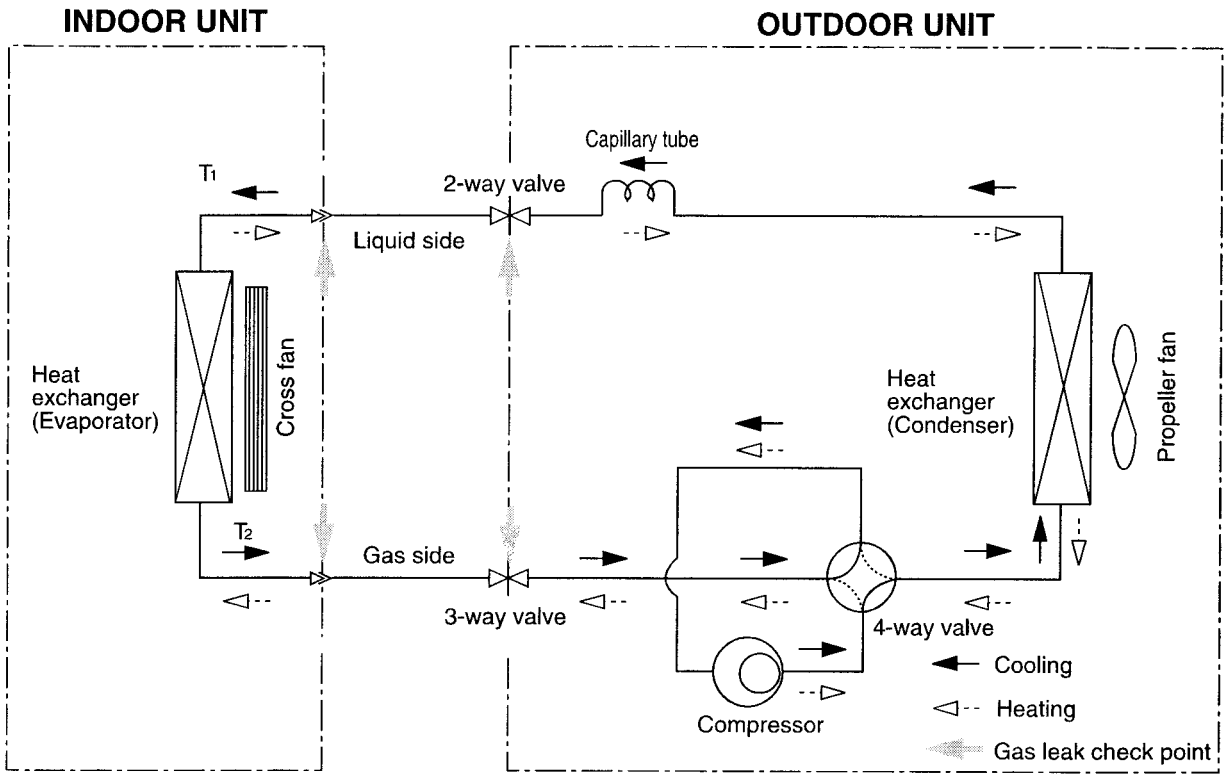


■ **Parts List**

No.	Code No.	Description	Specification	Q'TY	Remark
1	DB61-01127A	CASE-CONTROL AC	HIPS V0	1	
2	DB93-01347A	ASSY-MAIN PCB	ASSY	1	
3	DB93-01540A	ASSY-S/W & DISPLAY PCB	ASSY	1	
4	DB93-01369A	ASSY-MODULE PCB	ASSY	1	
5	DB65-00103B	ASSY-TERMINAL BLOCK	ASSY	1	
6	DB70-00289A	PLATE-TERMINAL LOW	SGCC-M,T1.2	1	
7	DB61-00171A	HOLDER-WIRE CRAMP	HIPS	1	
8	DB32-00020A	ASSY-THEMISTOR	ASSY	1	
9	-	SCREW-MACHINE	PH M3xL22	1	SNA
10	-	SCREW-MACHINE	TH M4xL10	1	SNA
11	-	SCREW-MACHINE	TH M4xL16	2	SNA
12	DB93-01380B	C/W MODULE	ASSY	1	
13	DB39-00643M	C/W STEP MOTOR UP/DOWN	ASSY	1	
14	DB93-01549B	POWER CORD	3G, 1.0mm²	1	
15	DB62-01368X	SEAL	61x40x3,30FOAM-PE,GRAY	1	
16	-	SCREW-MACHINE	PH M4x10	1	

5. Block Diagrams

5-1 Refrigerating Cycle Block Diagram

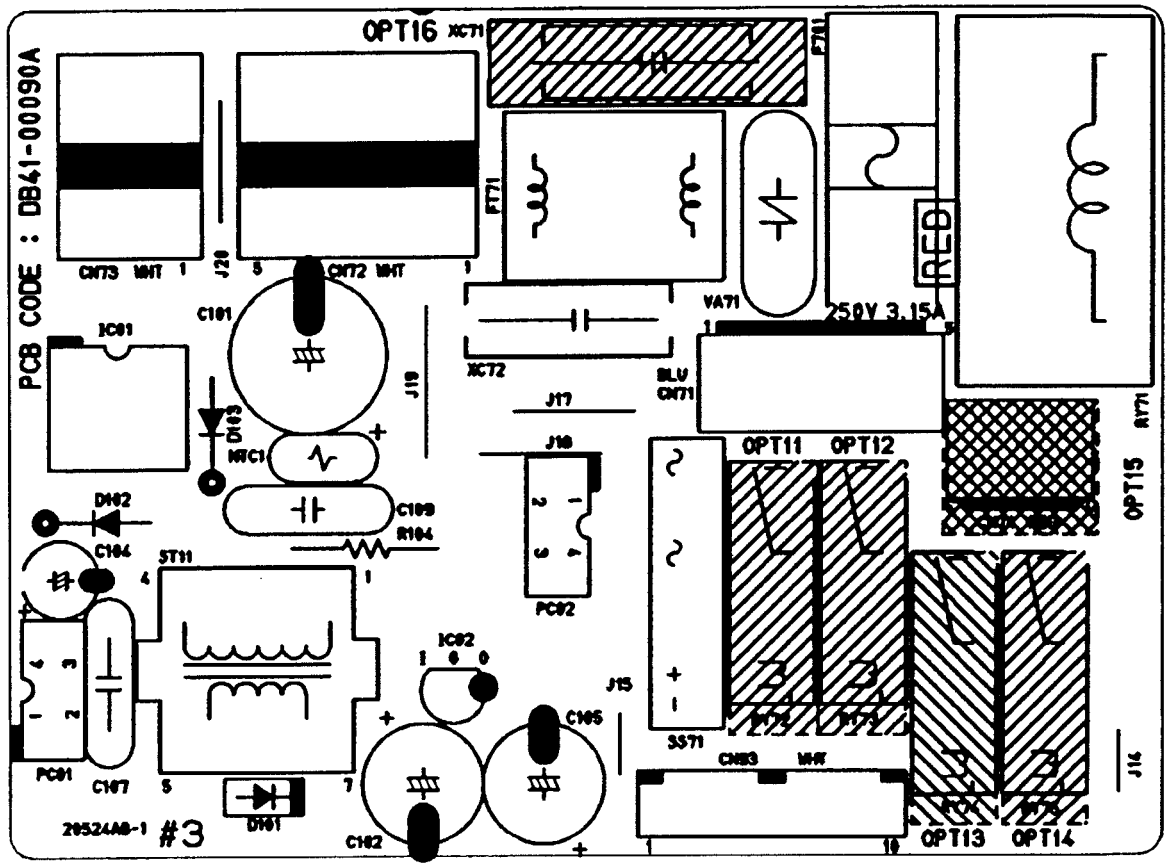


6. PCB Diagrams

6-1 MAIN PCB (AC) : DB93-01324A(Standard)

6-1-1 12K BTU

■ TOP

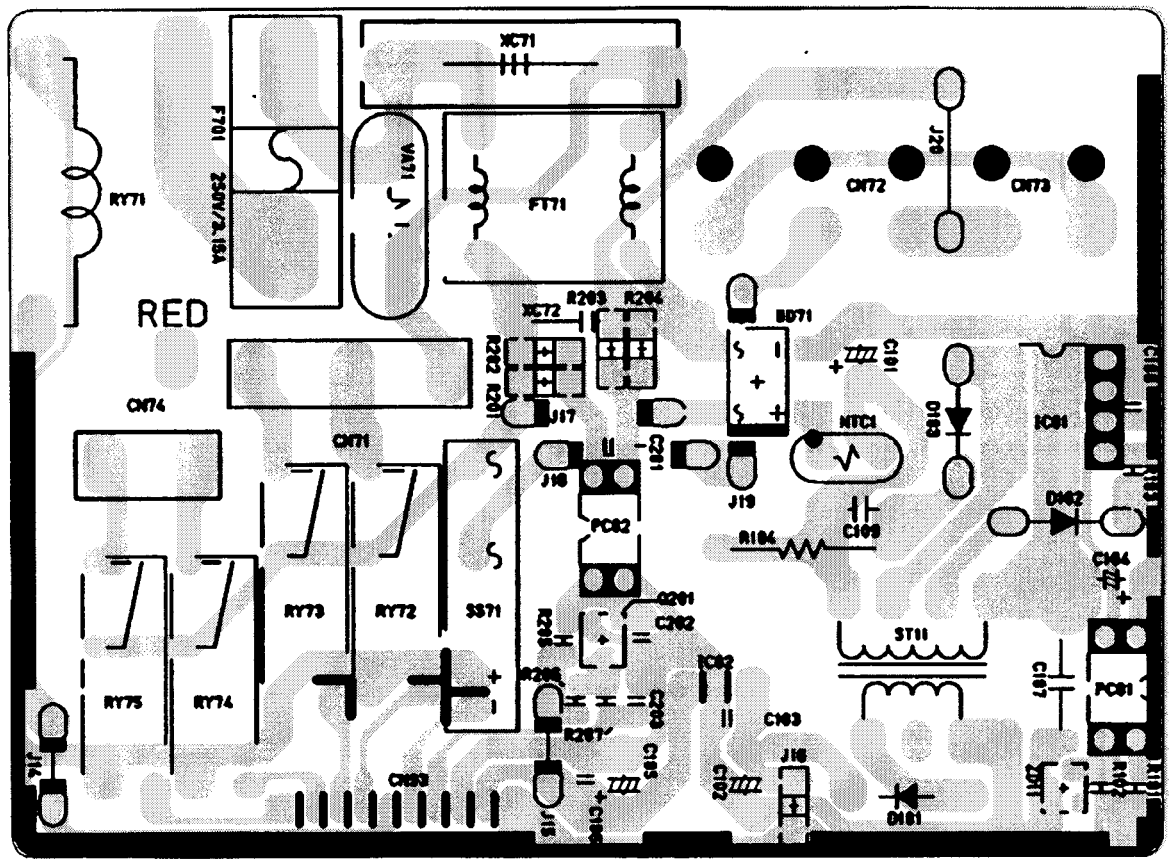


	OPT11	OPT12	OPT13	OPT14	OPT15	OPT16 (XC71)
DB93-01324A	○	○	×	×	×	220nF/250V
DB93-01324B	×	×	×	×	×	220nF/250V
DB93-01324C	○	○	○	×	○	220nF/250V
DB93-01324D	○	×	○	×	○	220nF/250V
DB93-01324E	○	○	○	○	○	220nF/250V
DB93-01324F	○	×	○	○	○	220nF/250V

■ Parts List

No	Location No.	Description	Specification	Q'TY	Remark
1	C101	C-AL	10uF,20%,450V,GP,TP,10x20mm,5	1	SNA
2	C102	C-AL	470uF,20%,25V,GP,TP,10x16,5	1	SNA
3	C104	C-AL	47uF,20%,50V,GP,TP,6.3x11,5	1	SNA
4	C105	C-AL	470uF,20%,16V,GP,TP,10x12.5,5	1	SNA
5	C107	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6,10	1	SNA
6	C109	C-CERAMIC,DISC	100nF,20%,1KV,TP,6	1	SNA
7	XC71	C-FILM,MPEF	220NF,10%,275V,BK,26.5x8.5x17MM,22.5	1	SNA
8	XC72	C-FILM,MPEF	100nF,10%,275V,BK,18x6x12,15	1	SNA
9	FT71	CHOKE-COIL	LS404190M,AS-S660,19MH,+50,-30%,-,300MOHM,2A,-,-,-	1	SNA
10	CN71	CONNECTOR-HEADER	1WALL,3P/5P,1R,3.96mm,STRAIGHT,SN	1	SNA
11	CN72	CONNECTOR-HEADER	1WALL,5P,1R,3.96mm,ANGLE,SN	1	SNA
12	CN73	CONNECTOR-HEADER	1WALL,2P/3P,1R,3.96mm,ANGLE,SN	1	SNA
13	CN74	CONNECTOR-HEADER	1WALL,3P,1R,3.96mm,STRAIGHT,SN	1	SNA
14	CN93	CONNECTOR-HEADER	BOX,10P,1R,-,STRAIGHT,SN	1	SNA
15	D101	DIODE-RECTIFIER	UG2D,200V,2A,DO-204AC,TP	1	SNA
16	D103	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	1	SNA
17	D102	DIODE-SWITCHING	1N4148,100V,200mA,DO-35,TP	1	SNA
18	F701	FUSE-CARTRIDGE	250V,3.15A,TIME-LAG,GLASS,5x20mm	1	SNA
19	IC01	IC-PWM CONTROLLER	VIPER12ADIP,DIP,8P,300MIL,PLASTI	1	SNA
20	IC02	IC-VOLT REGU	78L05A,TO-92,3P,-,PLASTIC,4.6	1	SNA
21	PC01	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST	1	SNA
22	PC02	PHOTO-COUPLER	TR,50-150%,200mW,DIP-4,ST	1	SNA
23	RY72,RY73,RY74,RY75	RELAY-MINIATURE	DC12V,3A 250V AC,-,-,10MS,10MS	4	SNA
24	RY71	RELAY-POWER	12VDC,0.9W,75mA,SPST,MAX 20msec,10mS	1	SNA
25	R104	R-METAL OXIDE(S)	91Kohm,5%,2W,AA,TP,4x12mm	1	SNA
26	SS71	SSR	12Vdc,-,2A,1mS,1mS	1	SNA
27	NTC1	THERMISTOR-NTC	22ohm,1.4A,3100K,9.5MW/C,-,7.0,-	1	SNA
28	ST11	TRANS	S/W TRANS;-,G-P/J,EE1916-V10,-,-,-	1	SNA
29	VA71	VARISTOR	560V,2500A,17.5x7.5mm,TP	1	SNA

■ BOTTOM



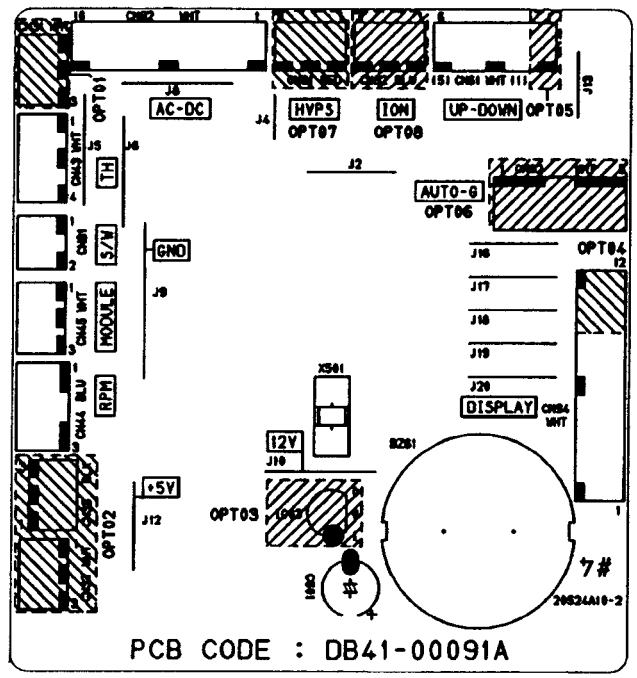
■ Parts List

No	Location No.	Description	Specification	Q'TY	Remark
1	BD71	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP	1	SNA
2	C103,C106,C108,C201	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012,	4	SNA
3	C202,C203	C-CERAMIC,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	2	SNA
4	Q201	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	1	SNA
5	R101	R-CHIP	100ohm,5%,1/10W,DA,TP,2012	1	SNA
6	R102	R-CHIP	2.2Kohm,5%,1/10W,DA,TP,2012	1	SNA
7	R103	R-CHIP	6.8ohm,5%,1/10W,DA,TP,2012	1	SNA
8	R201,R202,R203,R204	R-CHIP	100Kohm,5%,1/4W,DA,TP,3216	4	SNA
9	R205	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	1	SNA
10	R206,R207	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	2	SNA
11	ZD11	DIODE-ZENER	BZX84-C11,10.4-11.6V,350MW,SOT-23,TP	1	SNA

6-2 MAIN PCB (DC) : DB93-01325A(Standard)

6-2-1 12K BTU

■ TOP

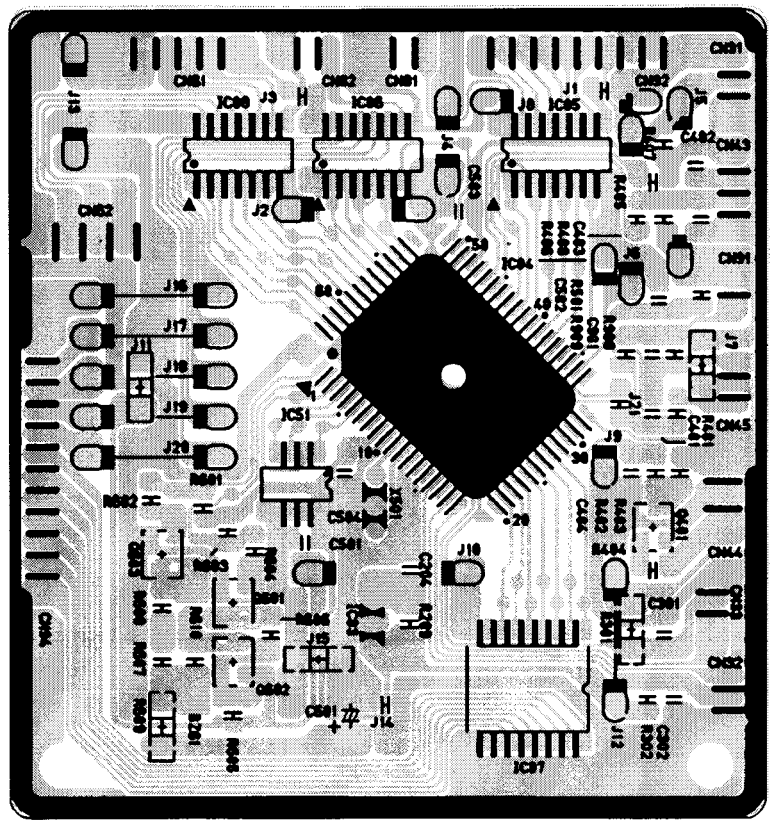


ASS'Y PCB	OPT01	OPT02	OPT03	OPT04 (CN94)	OPT05	OPT06	OPT07	OPT08
DB93-01325A	×	×	×	SMW200-09(WHT)	SMW200-05(WHT)	×	×	×
DB93-01325B	×	×	×	SMW200-12(WHT)	SMW200-05(WHT)	○	×	○
DB93-01325J	×	×	×	SMW200-12(WHT)	SMW200-05(WHT)	○	○	×
DB93-01325E	×	×	×	SMW200-09(WHT)	SMW200-06(WHT)	×	×	×
DB93-01325F	×	×	×	SMW200-12(WHT)	SMW200-06(WHT)	○	×	○
DB93-01325L	×	×	×	SMW200-12(WHT)	SMW200-06(WHT)	○	○	×

■ Parts List

No	Location No.	Description	Specification	Q'TY	Remark
1	BZ61	BUZZER-PIEZO	BUZZER-PIEZO;80DB,9V ,-,2.0KHZ,-	1	SNA
2	X501	RESONATOR-CERAMIC	10MHz,0.5%,TP,10.0x5.0x8.0mm	1	SNA
3	C601	C-AL	47uF,20%,50V,GP,TP,6.3x11,5	1	SNA
4	CN31	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN	1	SNA
5	CN32	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN	1	SNA
6	CN33	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN	1	SNA
7	CN43	CONNECTOR-HEADER	BOX,4P,1R,2MM,STRAIGHT,SN	1	SNA
8	CN44	CONNECTOR-HEADER	BOX,3P,1R,2.5mm,STRAIGHT,SN	1	SNA
9	CN45	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN	1	SNA
10	CN61	CONNECTOR-HEADER	BOX,5P,1R,2MM,STRAIGHT,SN	1	SNA
11	CN62	CONNECTOR-HEADER	BOX,5P,1R,2.5mm,STRAIGHT,SN	1	SNA
12	CN81	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN,RED	1	SNA
13	CN82	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN,BLU	1	SNA
14	CN91	CONNECTOR-HEADER	BOX,2P,1R,2mm,STRAIGHT,SN	1	SNA
15	CN92	CONNECTOR-HEADER	BOX,10P,1R,-,STRAIGHT,SN	1	SNA
16	CN94	CONNECTOR-HEADER	BOX,9P,1R,2mm,STRAIGHT,SN	1	SNA
17	IC03	IC-VOLTAGE	7533,TO-92,3P,-,SINGLE,-,-,PLA	-	SNA

■ BOTTOM



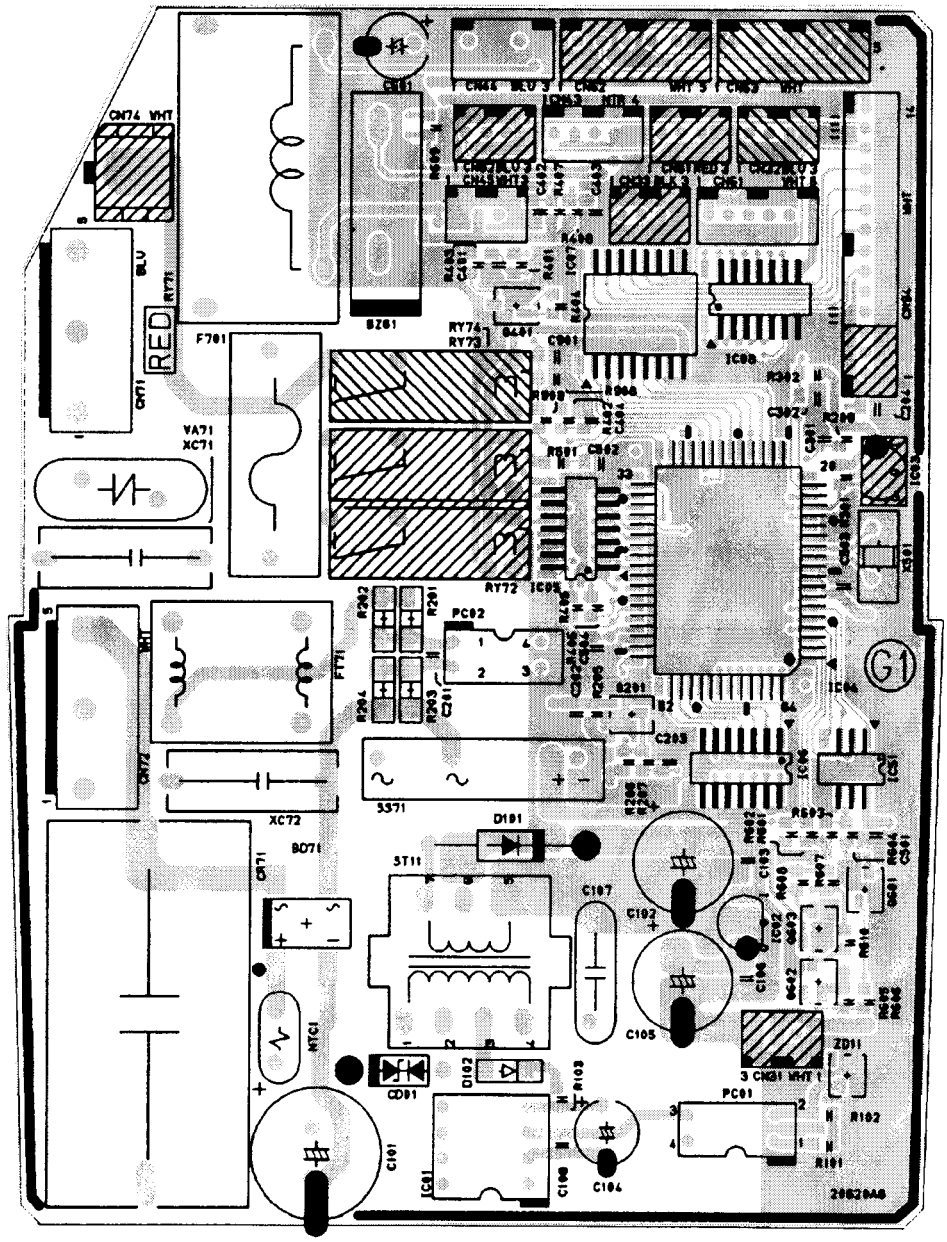
■ **Parts List**

No	Location No.	Description	Specification	Q'TY	Remark
1	C204,C301,C302,C402,C403 C501,C502,C503,C504,C901	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012	10	SNA
2	C401	C-CERAMIC,CHIP	1nF,10%,50V,X7R,TP,2012,-	1	SNA
3	C404	C-CERAMIC,CHIP	10nF,+80-20%,50V,Y5V,TP,2012	1	SNA
4	IC04	IC-MICOM	S3C8489XZZ-QTR5,-,64,+5V,10MHZ,STM-0219-O	1	SNA
5	IC05,IC06.IC08	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	3	SNA
6	IC07	IC-SOURCE DRIVER	TD62783AFW,SOL,18P,-,8,-500MA,TP,	1	SNA
7	IC51	IC-EEPROM	93LC56,128x16Bit,SOP,8P,150MIL,-,2.5V,-	1	SNA
8	Q401,Q601,Q603	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	3	SNA
9	Q602	TR-SMALL SIGNAL	MMST2907A,PNP,200mW,SOT-23,TP,100-	1	SNA
10	R209,R301,R302,R401,R402 R404,R602,R604,R610	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012	9	SNA
11	R403,R407,R408	R-CHIP	6.8Kohm,5%,1/10W,DA,TP,2012	3	SNA
12	R405,R406	R-CHIP	330ohm,5%,1/10W,DA,TP,2012	2	SNA
13	R501,R601,R603,R605,R908	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012	5	SNA
14	R606,R909	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012	2	SNA
15	R607,R608	R-CHIP	470ohm,5%,1/10W,DA,TP,2012	2	SNA
16	R609	R-CHIP	560ohm,5%,1/10W,DA,TP,2012	1	SNA

6-3 MAIN PCB : DB93-01347A(Standard)

6-3-1 9K BTU / 7K BTU

■ TOP



DL NAME / CODE NO.	OPT01	OPT02	OPT03	OPT04	OPT05	OPT06	OPT07	OPT08	OPT09	OPT10	OPT11
	RY72/ RY73	RY74 CN74	CN81	CN82	CN62	CN63	IC03	CN32	CN33	CN31	CN94
DB93-01347A	○	×	×	×	×	×	×	×	×	×	SMW200-11
DB93-01347B	×	×	×	○	×	×	×	×	×	×	SMW200-11
DB93-01347C	○	×	×	○	○	×	×	×	×	×	SMW200-14
DB93-01347D	○	×	○	○	○	×	×	×	×	×	SMW200-14
DB93-01347E	○	○	×	○	○	×	×	×	×	×	SMW200-14
DB93-01347F	×	×	×	○	○	×	×	×	×	×	SMW200-14
DB93-01347G	×	×	○	○	○	×	×	×	×	×	SMW200-14
DB93-01347H	×	○	×	○	○	×	×	×	×	×	SMW200-14
DB93-01347J	×	×	○	×	○	×	×	×	×	×	SMW200-14
DB93-01347K	×	×	×	×	○	×	×	×	×	×	SMW200-14

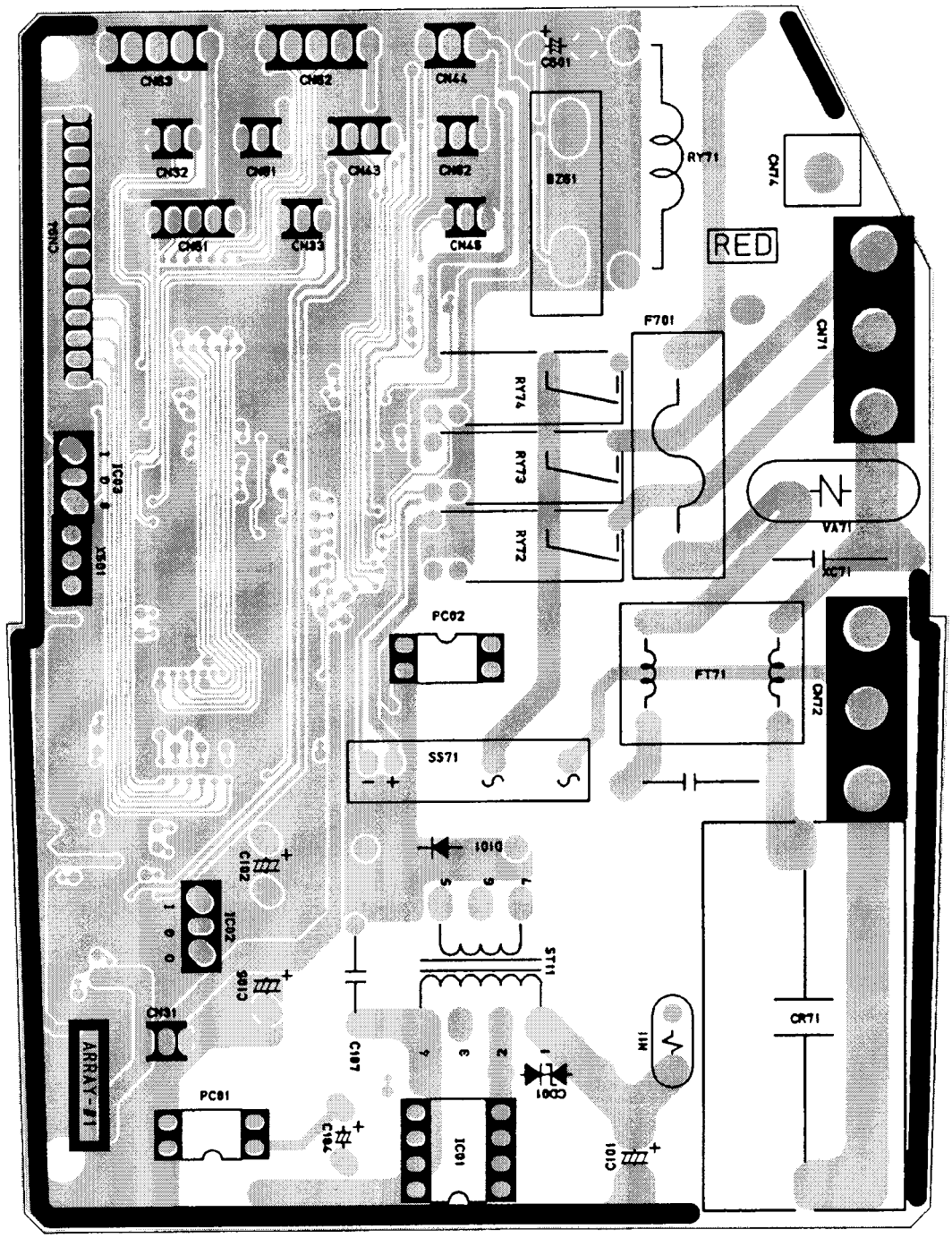
■ **Parts List**

No	Location No.	Description	Specification	Q'TY	Remark
1	BD71	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP	1	SNA
2	BZ61	BUZZER	80DB,9V ,-,2.0KHZ,-,26.5x22.0x7.0mm	1	SNA
3	C101	C-AL	10uF,20%,450V,GP,TP,13X20mm,5	1	SNA
4	C102	C-AL	470uF,20%,25V,GP,TP	1	SNA
5	C103,C106,C108,C201, C204,C301C302,C402, C403,C501,C502,C503, C504,C901	C-CERAMIC,DISC	100nF,+80-20%,50V,Y5V,TP,2012,	12	SNA
6	C104,C601	C-AL	47uF,20%,50V,GP,TP,6.3x11,5	2	SNA
7	C105	C-AL	470uF,20%,16V,GP,TP	1	SNA
8	C107	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6,10	1	SNA
9	C202,C203,C404	C-CERAMIC,DISC	10nF,+80-20%,50V,Y5V,TP,2012	3	SNA
10	C401	C-CERAMIC,DISC	1nF,10%,50V,X7R,TP,2012,-	1	SNA
11	CD01	DIODE-TVS	ST02D-200,185/200/215V,200W,DO-214	1	SNA
12	CN31,CN32,CN33	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN	3	SNA
13	CN43	CONNECTOR-HEADER	BOX,4P,1R,2MM,STRAIGHT,SN	1	SNA
14	CN44	CONNECTOR-HEADER	BOX,3P,1R,2.5mm,STRAIGHT,SN	1	SNA
15	CN45	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN	1	SNA
16	CN61	CONNECTOR-HEADER	BOX,5P,1R,2MM,STRAIGHT,SN	1	SNA
17	CN62,CN63	CONNECTOR-HEADER	BOX,5P,1R,2.5mm,STRAIGHT,SN	2	SNA
18	CN71	CONNECTOR-HEADER	1WALL,3P/5P,1R,3.96mm,STRAIGHT,SN	1	SNA
19	CN72	CONNECTOR-HEADER	1WALL,3P/5P,1R,3.96mm,STRAIGHT	1	SNA
20	CN74	CONNECTOR-TERMINAL	PIN,MALE,#18-22,2.35mm	1	SNA
21	CN81	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN,RED	1	SNA
22	CN82	CONNECTOR-HEADER	BOX,3P,1R,2MM,STRAIGHT,SN,BLU	1	SNA
23	CN94	CONNECTOR-HEADER	BOX,11P,1R,2mm,STRAIGHT,SN	1	SNA
24	CN94	CONNECTOR-HEADER	BOX,14P,1R,2mm,STRAIGHT,SN	1	SNA
25	CR71	C-FILM,MPPF	1.2uF,10%,450Vac,BK,38x18x30,3	1	SNA
26	D101	DIODE-RECTIFIER	UG2D,200V,2A,DO-204AC,TP	1	SNA
27	D102	DIODE-SWITCHING	RSL4148,100V,200mA,DO-35,TP	1	SNA
28	F701	FUSE-CARTRIDGE	250V,3.15A,TIME-LAG,GLASS,5x20mm	1	SNA
29	F701	FUSE-BLOCK	500V,-,100M	1	SNA
30	FT71	LS404190M	AS-S660,19MH,+50,-30%,-,300MOHM,2A,-,-,-	1	SNA
31	IC01	IC-PWM CONTROLLER	VIPER12ADIP,DIP,8P,300MIL,PLASTI	1	SNA
32	IC02	IC-POSI ADJUST REG	78L05A,TO-92,3P,-,PLASTIC,4.6/	1	SNA
33	IC03	IC-VOLTAGE	COMP,7533,TO-92,3P,-,SINGLE,-,-,PLA	-	SNA
34	IC04	IC-MICOM	S3C8489XZZ-QTR5,-,64,+5V,10MHZ,STM-0219-O	1	SNA
35	IC05,IC06,IC08	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	3	SNA
36	IC07	IC-SOURCE DRIVER	TD62783AFW,SOL,18P,-,8,-500MA,TP,	1	SNA

■ **Parts List(cont.)**

No	Location No.	Description	Specification	Q'TY	Remark
37	IC51	IC-EEPROM	93LC56,128x16Bit,SOP,8P,150MIL,-,2.5V,-	1	SNA
38	NTC1	THMISTOR-NTC	22ohm,1.4A,3100K,9.5MW/C,-,7.0,-	1	SNA
39	PC01	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST	1	SNA
40	PC02	PHOTO-COUPLER	TR,50-150%,200mW,DIP-4,ST	1	SNA
41	Q201,Q401,Q601,Q603	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1	4	SNA
42	Q602	TR-SMALL SIGNAL	MMST2907A,PNP,200mW,SOT-23,TP,100-	1	SNA
43	R101	R-CHIP	100ohm,5%,1/8W,DA,TP,2012	1	SNA
44	R102	R-CHIP	2.2Kohm,5%,1/8W,DA,TP,2012	1	SNA
45	R103	R-CHIP	6.8ohm,5%,1/8W,DA,TP,2012	1	SNA
46	R201,R202,R203,R204	R-CHIP	100Kohm,5%,1/4W,DA,TP,3216	4	SNA
47	R205,R501,R601,R603, R605,R908	R-CHIP	10Kohm,5%,1/8W,DA,TP,2012	6	SNA
48	R206,R207,R209,R301, R302R401,R402,R404, R602,R604,R610	R-CHIP	1Kohm,5%,1/8W,DA,TP,2012		SNA
49	R403	R-CHIP	6.8Kohm,5%,1/8W,DA,TP,2012	1	SNA
50	R405,R406	R-CHIP	330ohm,5%,1/8W,DA,TP,2012	2	SNA
51	R407,R408	R-CHIP	6.8Kohm,1%,1/8W,DA,TP,2012	2	SNA
52	R606,R909	R-CHIP	4.7Kohm,5%,1/8W,DA,TP,2012	2	SNA
53	R607,R608	R-CHIP	470ohm,5%,1/8W,DA,TP,2012	2	SNA
54	R609	R-CHIP	560ohm,5%,1/8W,DA,TP,2012	1	SNA
55	RY71	RELAY-POWER	12VDC,0.9W,75mA,SPST,MAX 20msec,10mS	1	SNA
56	RY72,RY73	RELAY-POWER	DC12V,3A 250V AC,-,-,10MS,10MS	2	SNA
57	RY74	RELAY-POWER	DC12V,3A 250V AC,-,-,10MS,10MS	1	SNA
58	SS71	SSR	12Vdc,-,2A,1mS,1mS	1	SNA
59	ST11	TRANS SWITCHING-S	W TRANS;-,W-P/J,-,-,-,-,-,-,-,-,	1	SNA
60	VA71	VARISTOR	560V,2500A,17.5x7.5mm,TP	1	SNA
61	X501	RESONATOR-CERAMIC	10MHz,0.5%,TP,10.0x5.0x8.0mm	1	SNA
62	XC71	C-FILM,MPPF	100nF,10%,275V,BK,18x6x12,15	1	SNA
63	XC72	C-FILM,MPPF	220nF,10%,275V,BK,18x12x6,18	1	SNA
64	ZD11	DIODE-ZENER	BZX84-C11,10.4-11.6V,350MW,SOT-23,TP	1	SNA

■ BOTTOM


CN83
CN82
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C501
CN32
CN81
CN43
CN42
CN31
CN33
CN45
CN34
BZ01
RY71
CN74
RED
F701
CN71
RY74
RY73
RY72
IC03
XS01
VA71
XC71
PC02
FT71
CR72
SS71
D101
C102
IC02
C103
ST11
CN91
CR71
H11
C107
D103
ARRAY-#1
PC01
C104
IC01
C101

6-4 ASS'Y DISPLAY PCB

■ 12K : DB93-01367A, 9K / 7K : DB93-01540A

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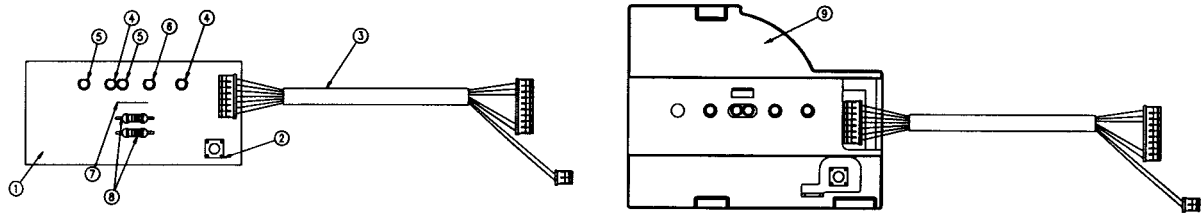

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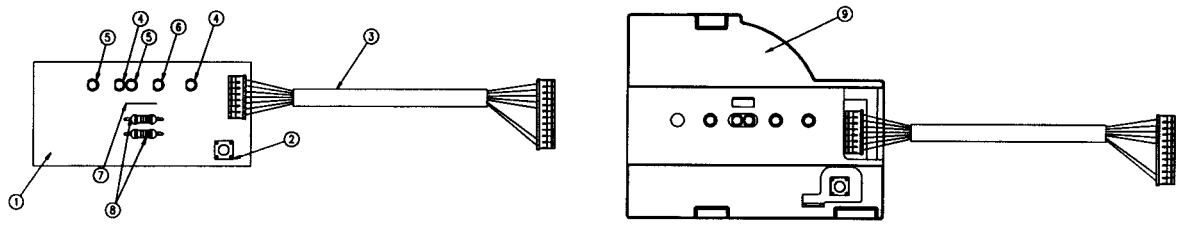
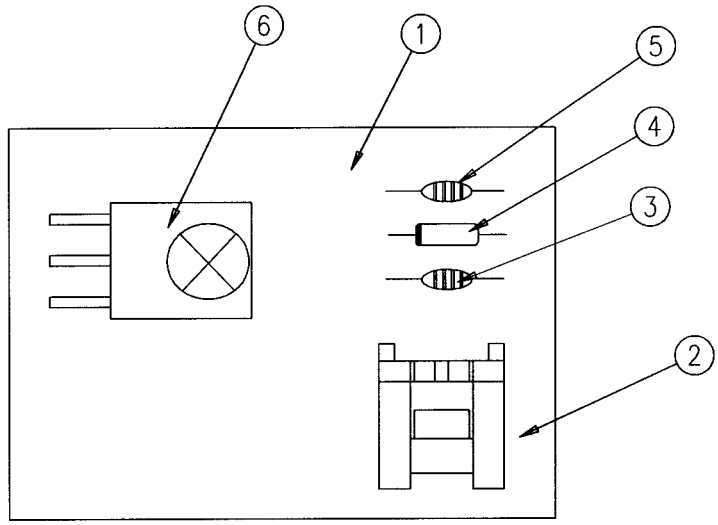


■ Parts List

No	Description	Specification	Q'TY	Remark
1	PCB DISPLAY	FR1 T1.6	1	SNA
2	SWITCH-TACT	12V, 50MA, 160GF, 6.1 x 6.1 x 5.0MM, SPST	1	SNA
3	CONNECTOR-WIRE DISPLAY	7P	1	SNA
4	LED	3mm, 570nm, GRN	2	SNA
5	LED	3mm, 630nm, RED	2	SNA
6	LED	3mm, 585nm, YEL	1	SNA
7	JUMP WIRE	10mm	1	SNA
8	R-CARBON	1/2W, 470ohm	2	SNA
9	HOLDER DISPLAY PCB	ABS	1	SNA

6-5 ASS'Y MODULE PCB : DB93-01369A



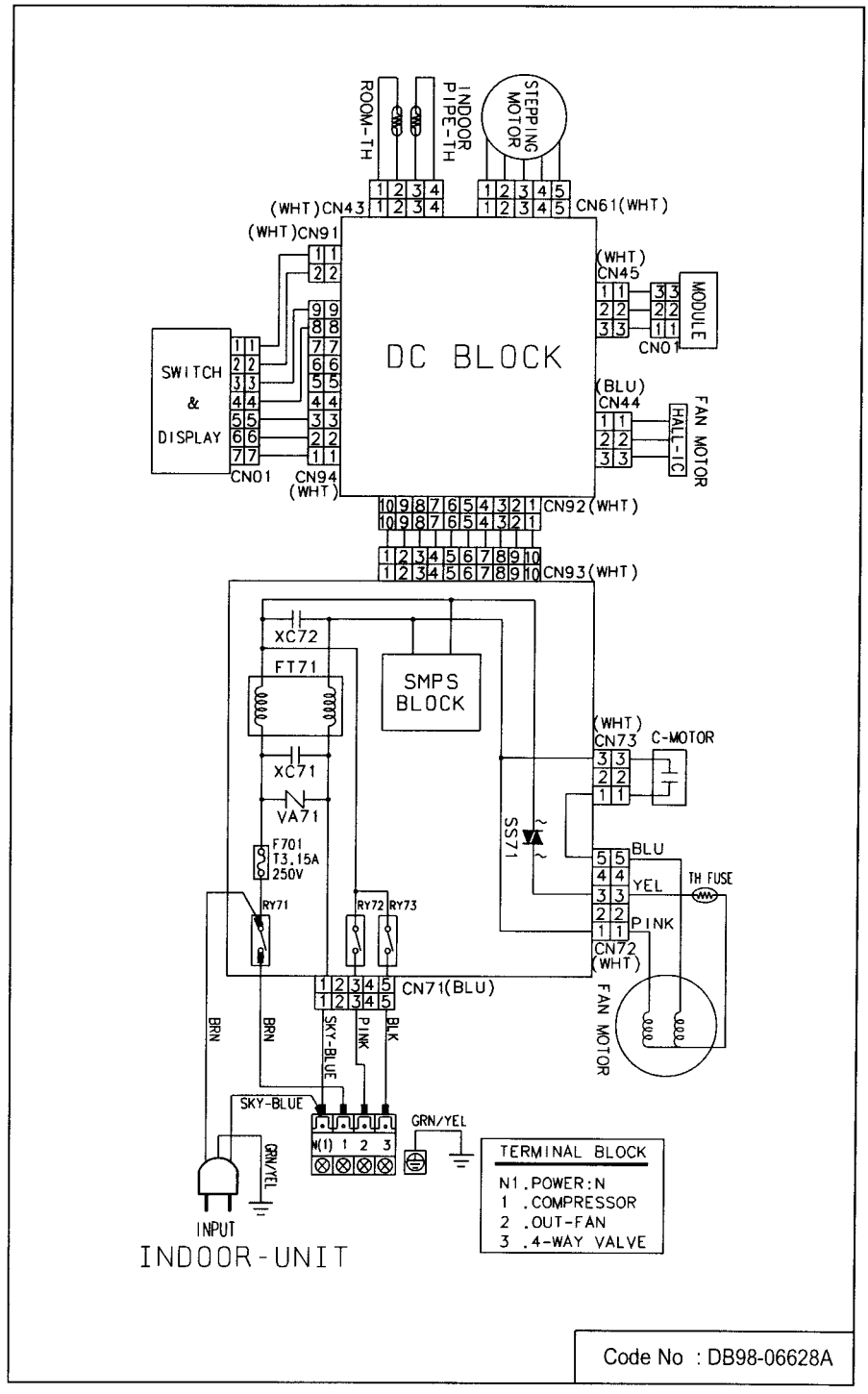
■ **Parts List**

No	Description	Specification	Q'TY	Remark
1	PCB MODULE	FR1 T1.6	1	SNA
2	CONNECTOR-HEADER	BOX, 3P, 1R, 2mm, ANGLE, SN	1	SNA
3	C-CERAMIC, MLC-AXIAL	1nF, 10%, 50V, Y5P, TP, 1.9 x 3.5, -	1	SNA
4	DIODE-SWITCHING	1N4148, 100V, 200mA, DO-35, TP	1	SNA
5	C-CERAMIC, MLC-AXIAL	100nF, +80-20%, 50V, Y5V, TP, 3.5 x 1	1	SNA
6	MODULE	FRP4021H7	1	SNA

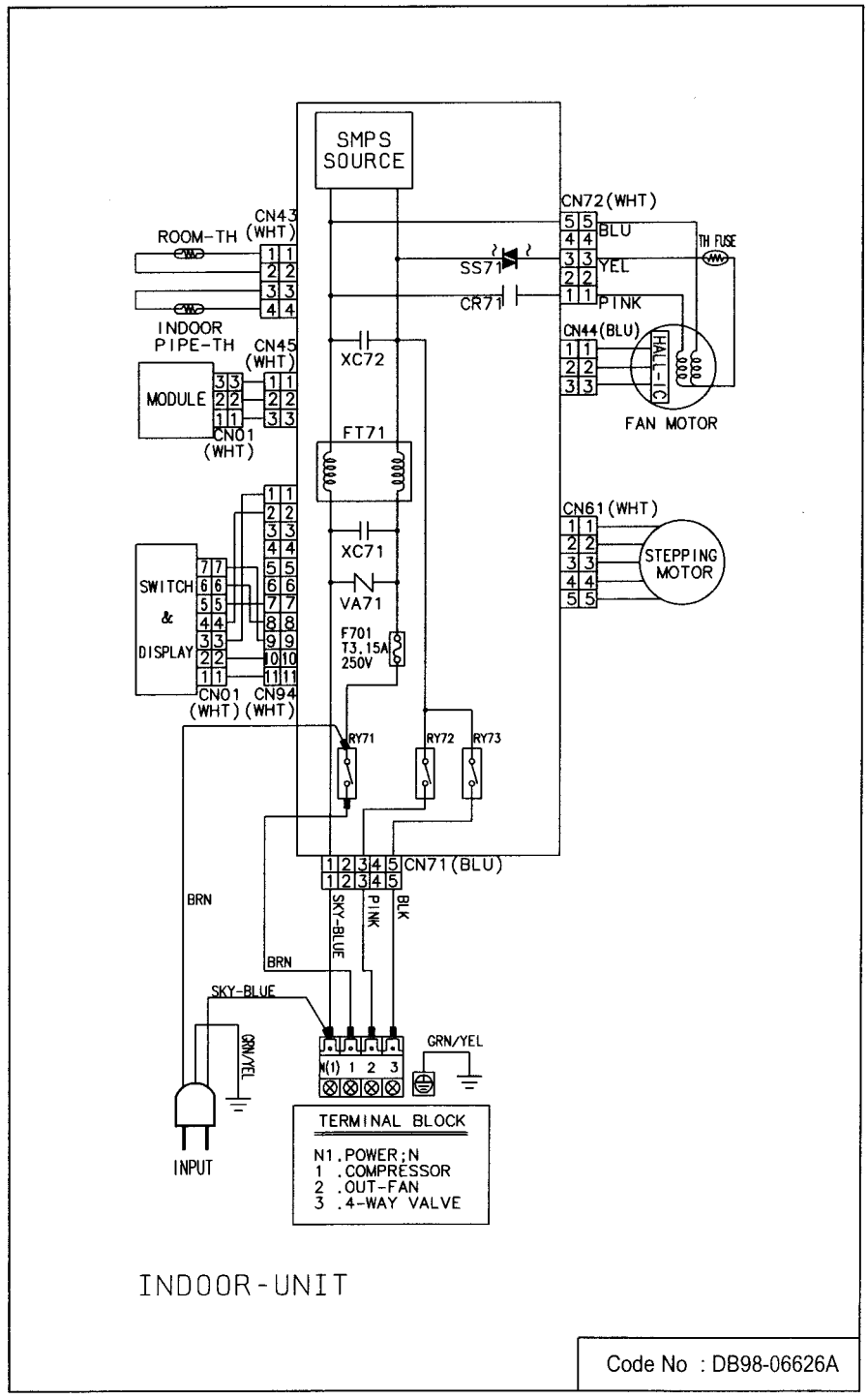
7. Wiring Diagrams

7-1 Indoor Unit

7-1-1 12K BTU

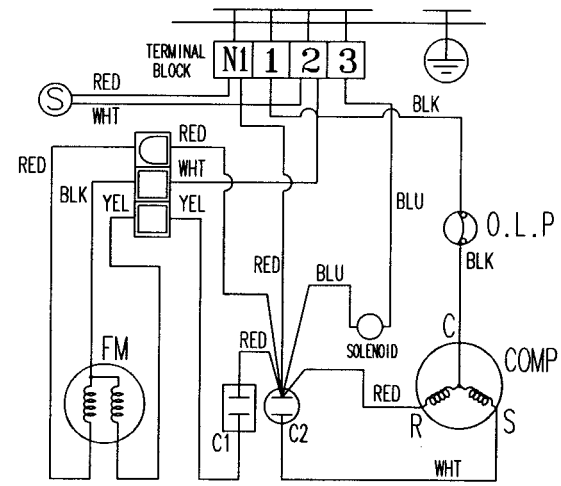


7-1-2 9K BTU/7K BTU



7-2-1 PLASTIC OUTDOOR UNIT

DIAGRAM-OUTDOOR

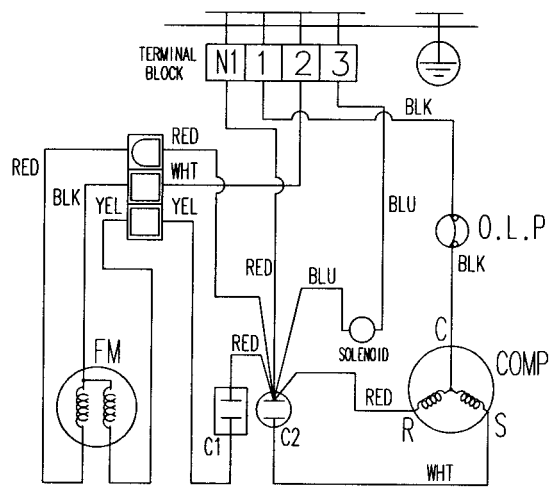


C1 : MOTOR CAPACITOR FM : FAN MOTOR S : SPARK KILLER
C2 : COMP CAPACITOR O.L.P : OVER LOAD PROTECTOR

Code No : DB68-02773A

7-2-2 STEEL OUTDOOR UNIT

DIAGRAM-OUTDOOR



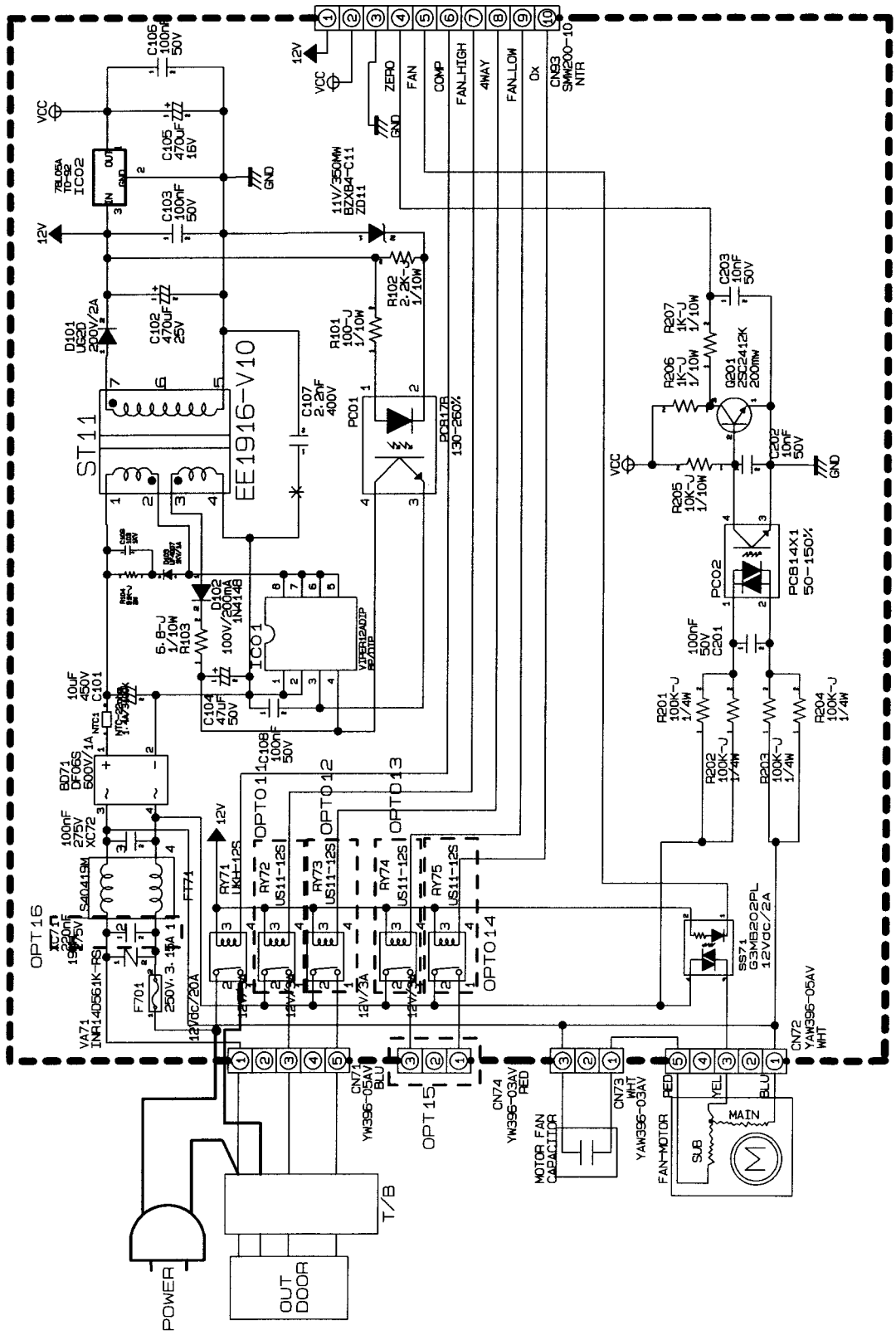
C1 : MOTOR CAPACITOR FM : FAN MOTOR
C2 : COMP CAPACITOR O.L.P : OVER LOAD PROTECTOR

Code No : DB68-11762A

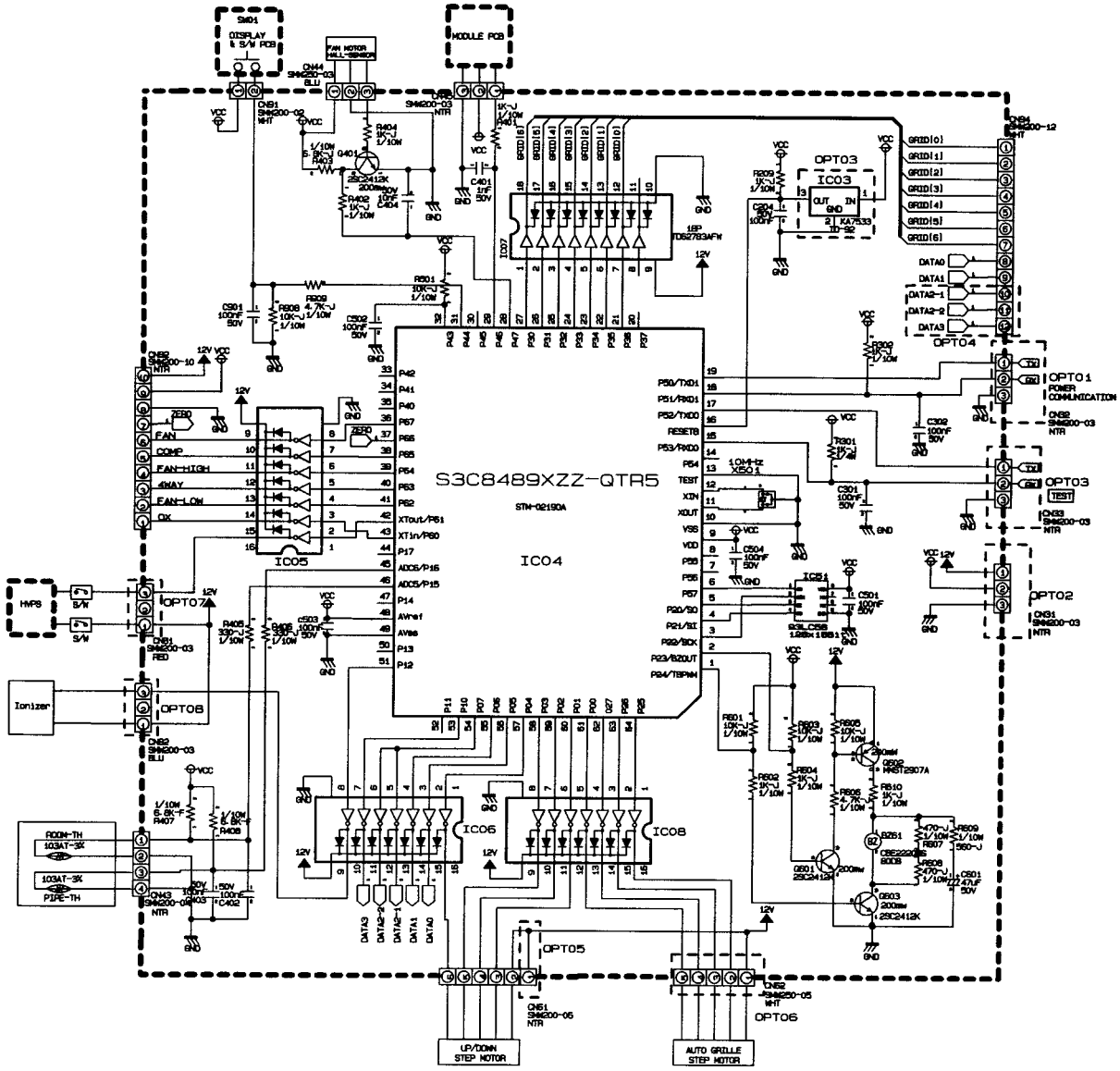
8. Schematic Diagrams

8-1 Indoor Unit

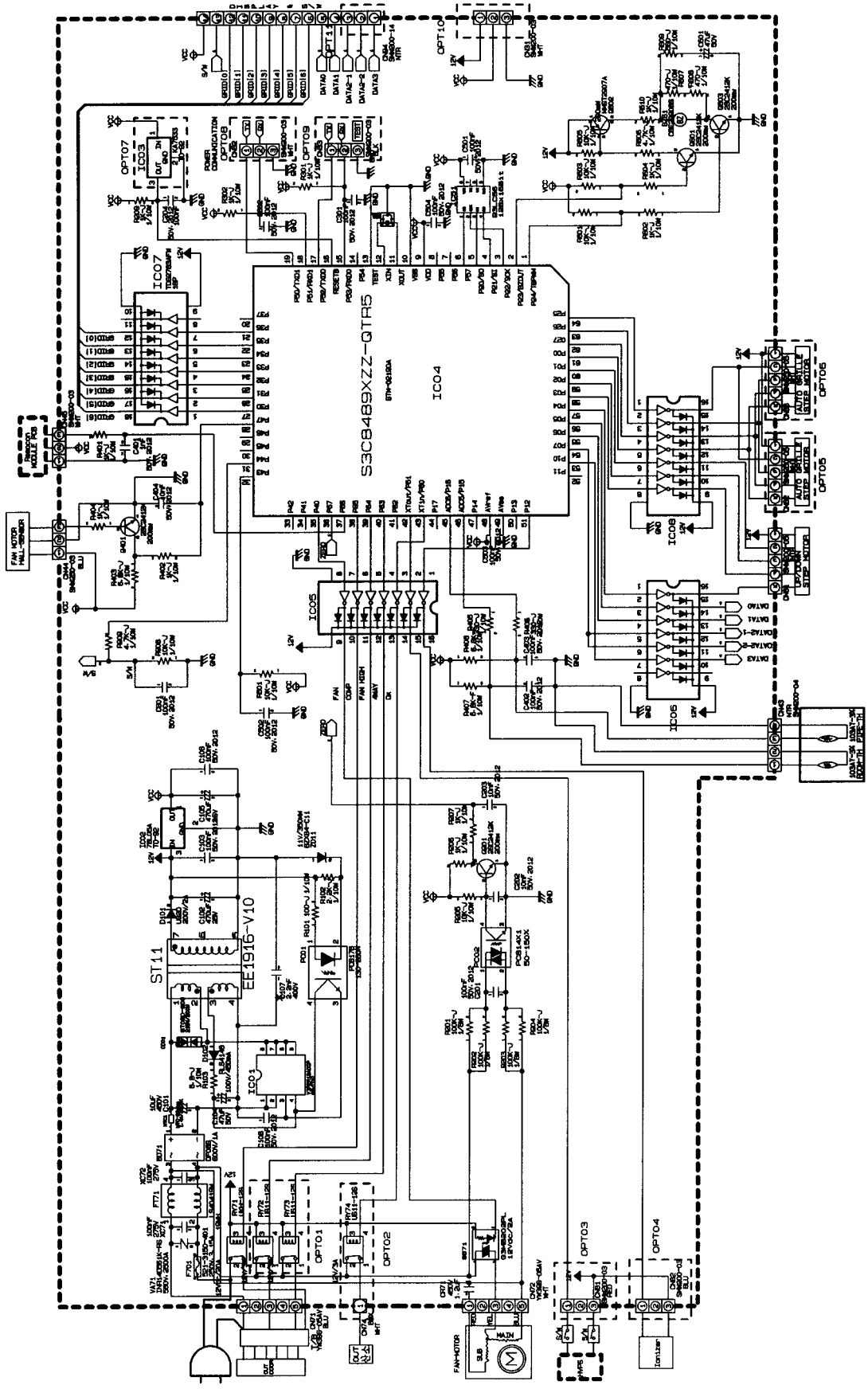
8-1-1 12K BTU (AC-PART)



8-1-2 12K BTU (DC-PART)



8-1-3 9K BTU/7K BTU (MAIN PART)



UPDATE LOG SHEET

Application date	Page	Part#	Note(Cause & Solution)	S/Bulletin#

Use this page to keep any special servicing information. (Service Bulletin, etc.)
If only parts number changes, Just change parts number directly on parts list.
And if you need more information, please see the service website.

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